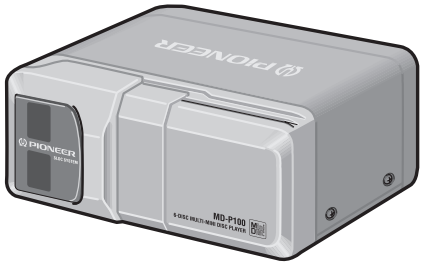
PIONEER®
The Art of Entertainment

Service Manual



ORDER NO.
CRT2203

6-DISC MULTI-MINI DISC PLAYER

MD-P100 EW

Mini Disc

● **US and foreign patents licensed from Dolby Laboratories Licensing Corporation.**

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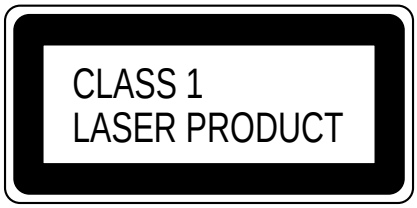
K-FEA. APR. 1998 Printed in Japan

1. SAFETY INFORMATION

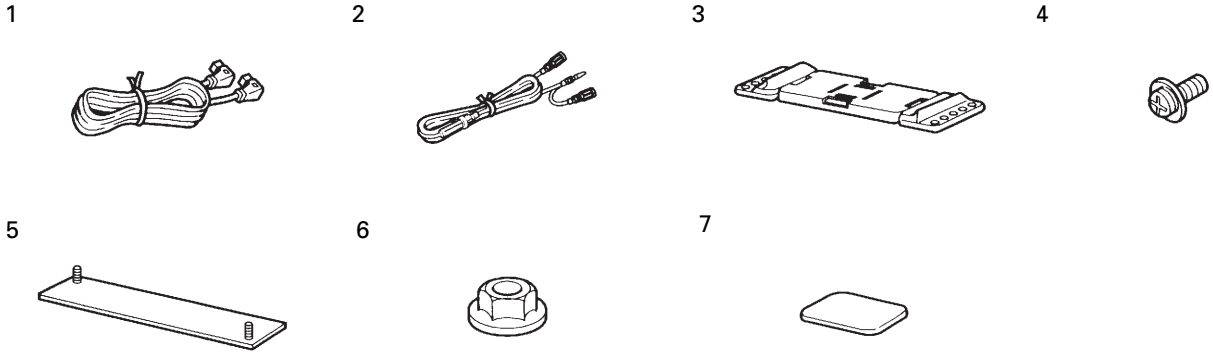
This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer.
Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty.
If you are not qualified to perform the repair of this product properly and safely; you should not risk trying to do so and refer the repair to a qualified service technician.

A "CLASS 1 LASER PRODUCT" label is affixed to the rear of the player.



2. EXPLODED VIEWS AND PARTS LIST

2.1 PACKING



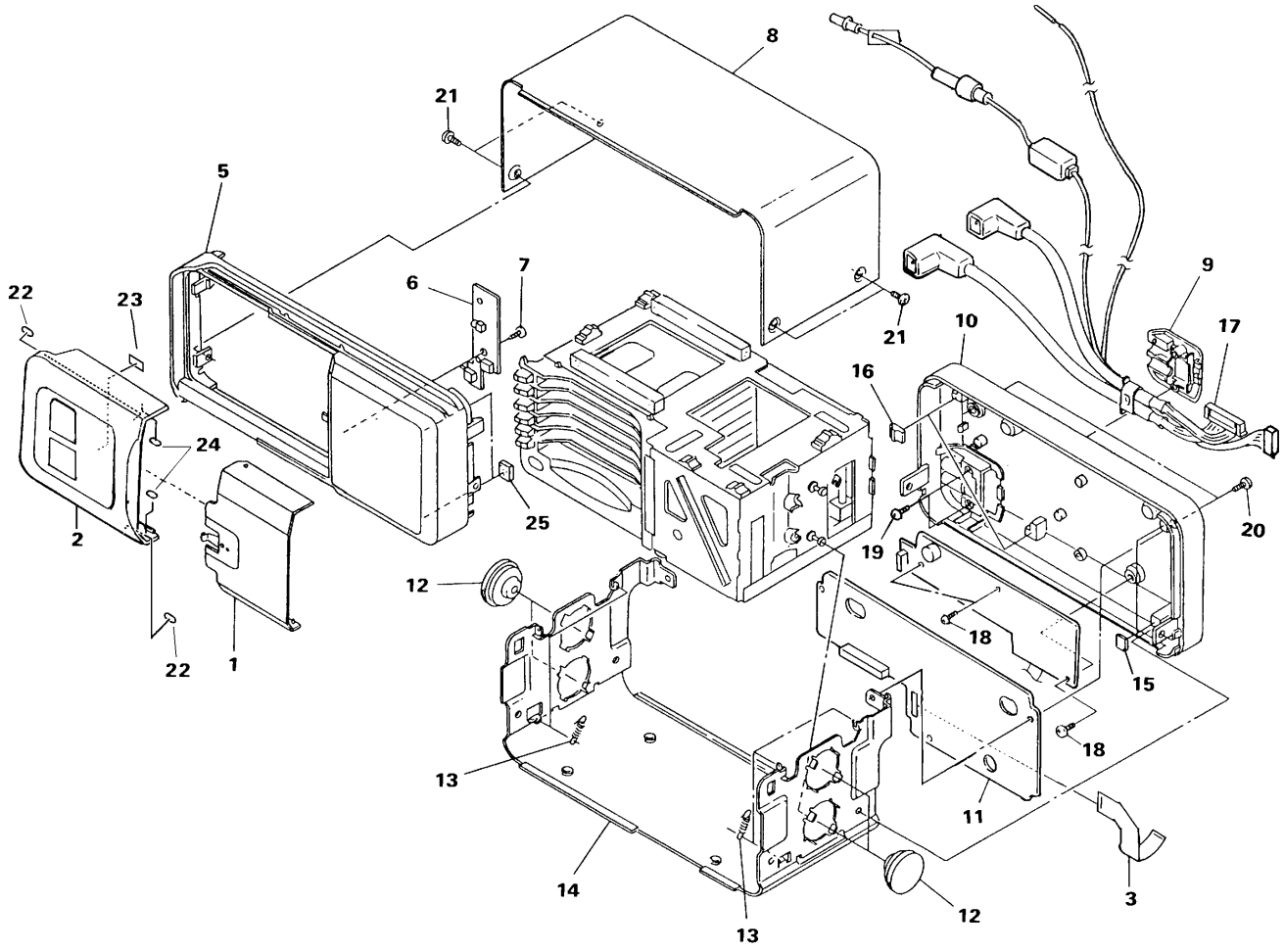
NOTE:

- Parts marked by "*"are generally unavailable because they are not in our Master Spare Parts List.
- Screws adjacent to ∇ mark on the product are used for disassembly.

● PACKING SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Cord	CZD3030
	2	Cord	CZD3036
	3	Base	CZN5122
	4	PSW	CZB3044
	5	Installation Base Assy	CZX3015
	6	Nut	CZB3043
	7	Cushion	CZN5092
		Cushion F	CZN5090
		Cushion R	CZN5091
		Owner's Manual (English, Spanish, German)	CZR3024
		Owner's Manual (French, Italian, Dutch)	CZR3025
		Installation Manual (English, Spanish, German, French, Italian, Dutch)	CZR3026
*		Warranty Card	CZR3027
		Carton	CZH3047
		Contain Box	CZH3048

2.2 EXTERIOR

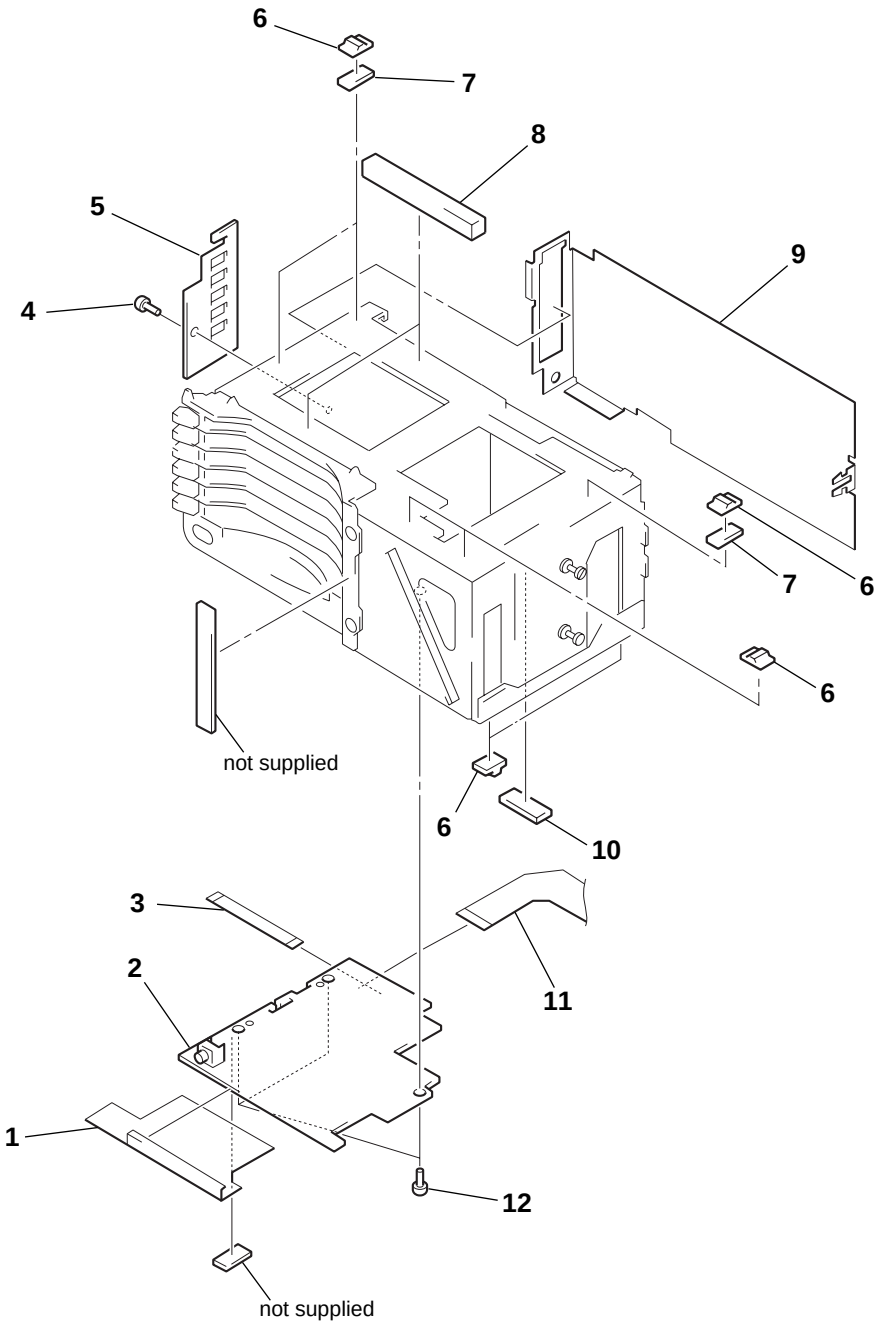


● EXTERIOR SECTION PARTS LIST

Mark No.	Description	Part No.
1	Door Assy	CZX3010
2	Door Assy	CZX3067
3	PCB	CZN5082
4	•••••	
5	Front Panel Assy	CZX3068
6	Lamp PCB	CZN5081
7	Screw	CZB3036
8	Case(Upper)	CZN5143
9	Cover	CZN5086
10	Rear Panel Assy	CZX3012
11	Power PCB Assy	CZW3061
12	Damper	CZN5071
13	Spring	CZB3038
14	Case(Lower)	CZN5142
15	Cushion	CZN5085

Mark No.	Description	Part No.
16	Cushion	CZN5068
17	Cord	CZD3037
18	Self-Tapping Screw	CZB3041
19	Self-Tapping Screw	CZB3042
20	PTT	CZB3039
21	BVTT	CZB3037
22	Sheet	CZN5080
23	Cushion	CZN5079
24	Spacer	CZN5117
25	Cushion	CZN5068

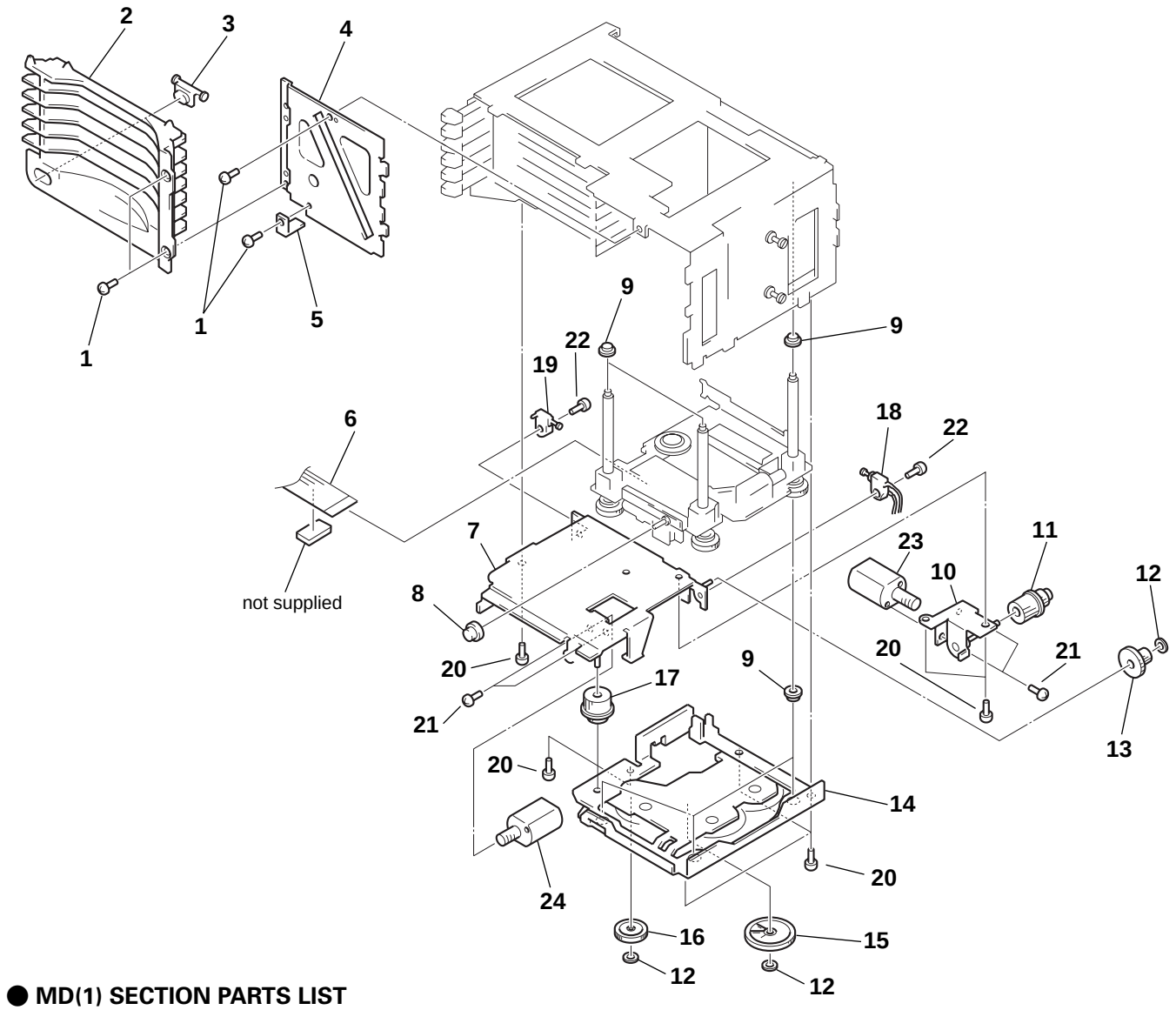
2.3 MAIN PCB



● MAIN PCB SECTION PARTS LIST

Mark No.	Description	Part No.
1	Sheet	CZN5073
2	Main PCB	CZW3057
3	Cable	CZD3029
4	Screw	CZB3036
5	Sensor PCB	CZN5087
6	Cushion	CZN5068
7	Cushion	CZN5069
8	Cushion	CZN5075
9	Sheet	CZN5072
10	Cushion	CZN5074
11	PCB	CZN3100
12	Screw	CZB3073

2.4 MD(1)

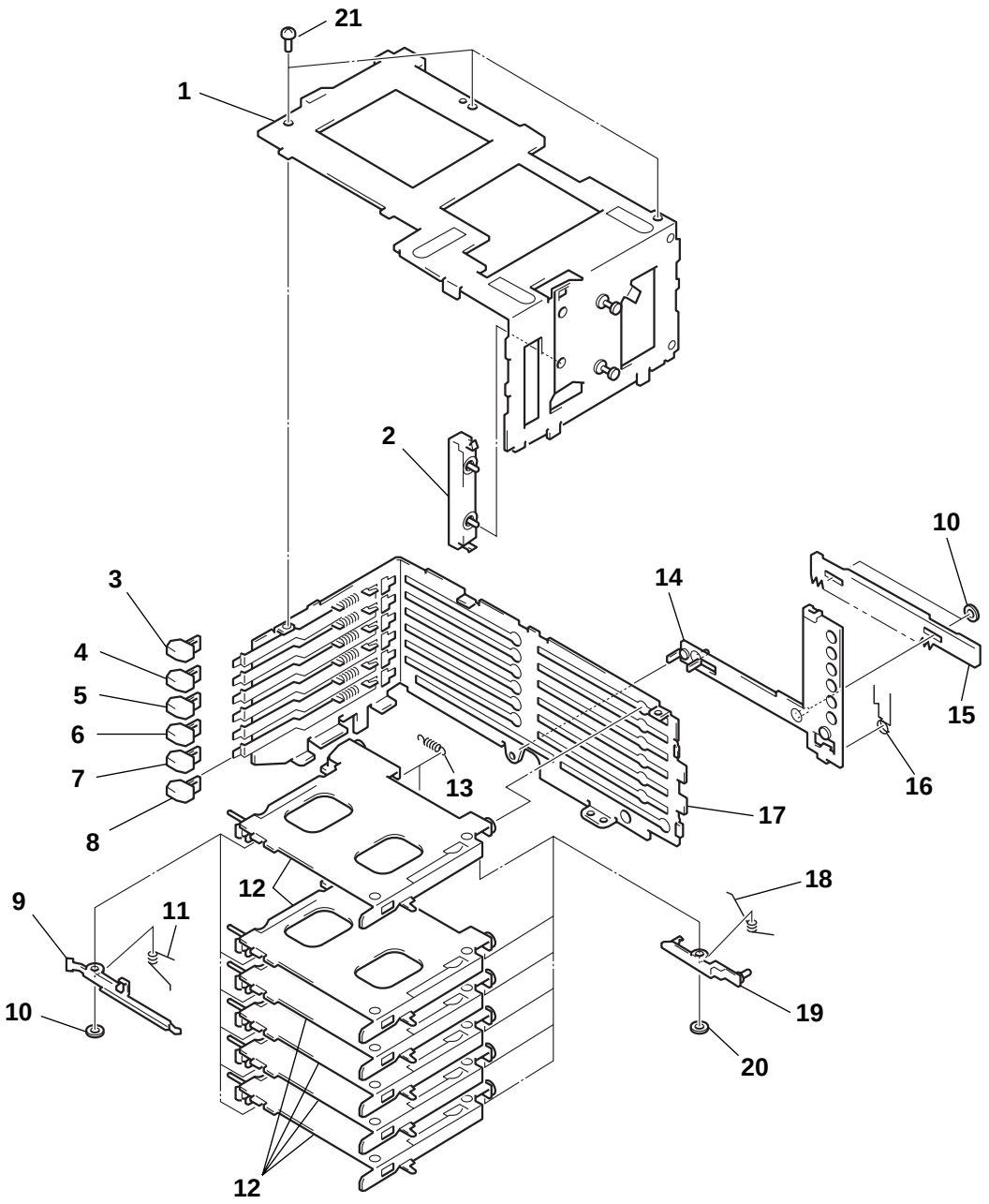


● MD(1) SECTION PARTS LIST

Mark No.	Description	Part No.
1	Screw	CZB3046
2	Escutcheon	CZN5098
3	Button(Stop)	CZA3022
4	Chassis(Front)	CZN5100
5	Plate	CZN5102
6	PCB	CZN5093
7	Chassis(Motor)Assy	CZX3069
8	Collar	CZL3004
9	Bearing	CZN5096
10	Plate(LD2)Assy	CZX3071
11	Worm Wheel	CZN5116
12	Washer	CZB3065
13	Gear(LD)	CZN5113
14	Chassis(Bottom A)Assy	CZX3065
15	Gear	CZN5097

Mark No.	Description	Part No.
16	Gear(ELV2)	CZN5145
17	Worm Wheel(ELV2)	CZN5147
18	Switch	CZS3038
19	Switch	CZS3039
20	Screw	CZB3048
21	Screw	CZB3049
22	Screw	CZB3059
23	LD Motor Assy	CZX3076
24	ELV Motor Assy	CZX3077

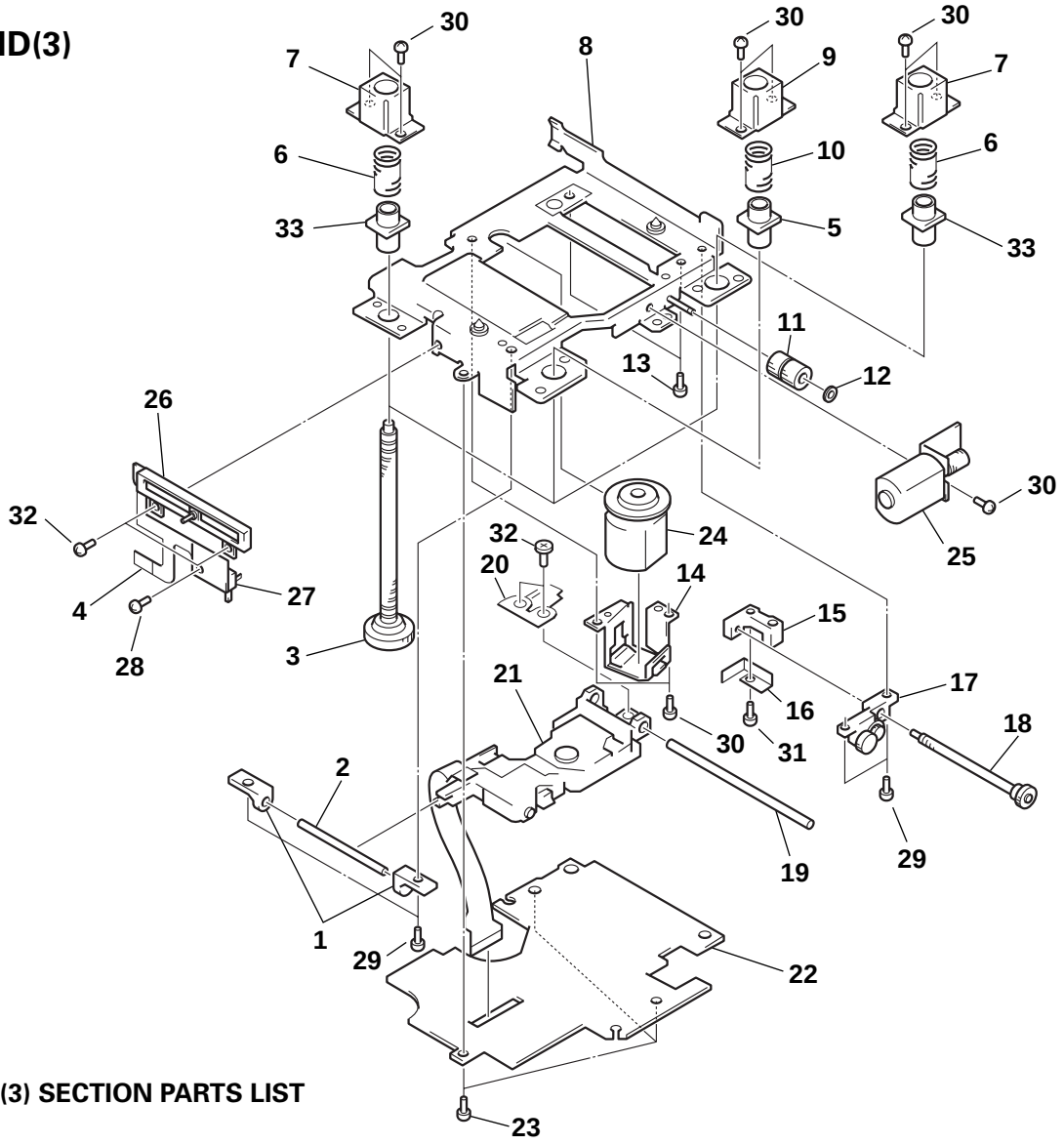
2.5 MD(2)



● MD(2) SECTION PARTS LIST

Mark No.	Description	Part No.
1	Chassis Assy	CZX3034
2	Guide(Holder 2)	CZN5144
3	Button(EJECT)	CZA3023
4	Button(EJECT)	CZA3024
5	Button(EJECT)	CZA3025
6	Button(EJECT)	CZA3026
7	Button(EJECT)	CZA3027
8	Button(EJECT)	CZA3028
9	Eject Lever	CZN5112
10	Washer	CZB3065
11	Spring(EJ)	CZB3063
12	Holder(Caddie)Assy	CZX3026
13	Spring(D Lock)	CZB3064
14	Loading Slider 2 Assy	CZX3070
15	Rack(Loading)	CZN5115
16	Spring	CZB3068
17	Chassis(Rear 2)Assy	CZX3064
18	Spring(Lock)	CZB3062
19	Plate(Holder)Assy	CZX3027
20	Washer	CZN5111
21	Screw	CZB3048

2.6 MD(3)



● MD(3) SECTION PARTS LIST

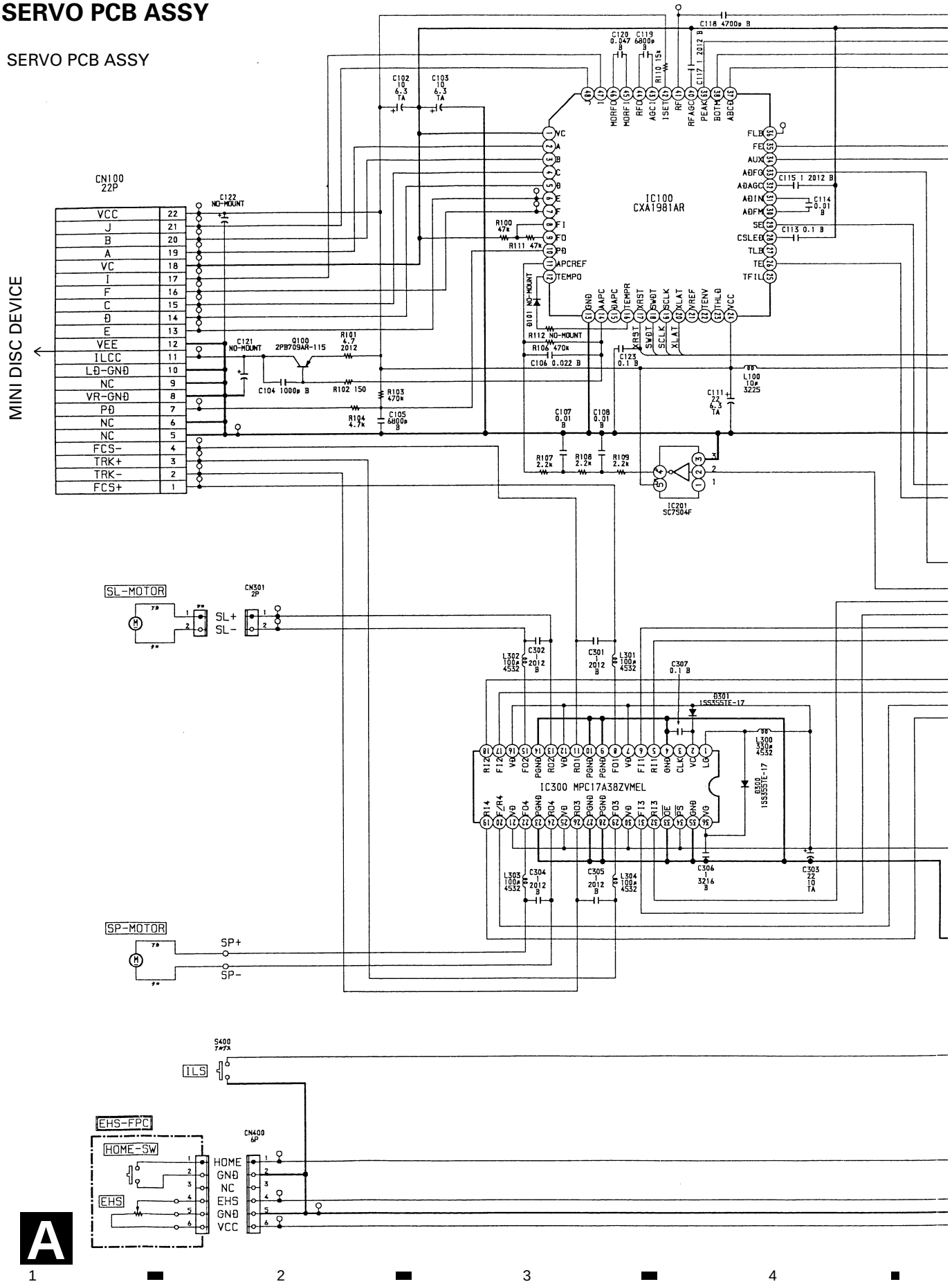
Mark No.	Description	Part No.
1	Holder	CZN5106
2	Guide(OPB)	CZL3003
3	Screw Assy	CZX3037
4	PCB	CZN5064
5	Sleeve(ELV)	CZN5103
6	Spring(ELV)	CZB3051
7	ELV Limiter Plate B	CZN5110
8	Chassis(OP)Assy	CZX3024
9	ELV Limiter Plate A	CZN5109
10	Spring	CZB3053
11	Worm Wheel	CZN5107
12	Washer	CZB3050
13	Screw	CZB3070
14	Plate	CZN5108
15	Holder(SLB)	CZN5104

Mark No.	Description	Part No.
16	Spring	CZB3052
17	Holder	CZX3022
18	Screw	CZX3023
19	Guide(OPA)	CZL3002
20	Spring	CZN5105
21	Mini Disc Device	CZG3005
22	Servo PCB Assy	CZW3054
23	Screw	CZB3054
24	SP Motor	CZX3019
25	SL Motor Assy	CZX3020
26	Slide Variable Resistor	CZC5118
27	Switch	CZS3039
28	Screw	CZB3059
29	Screw	CZB3056
30	Screw	CZB3055
31	Screw	CZB3058
32	Screw	CZB3048
33	Sleeve(ELV2)	CZN5146

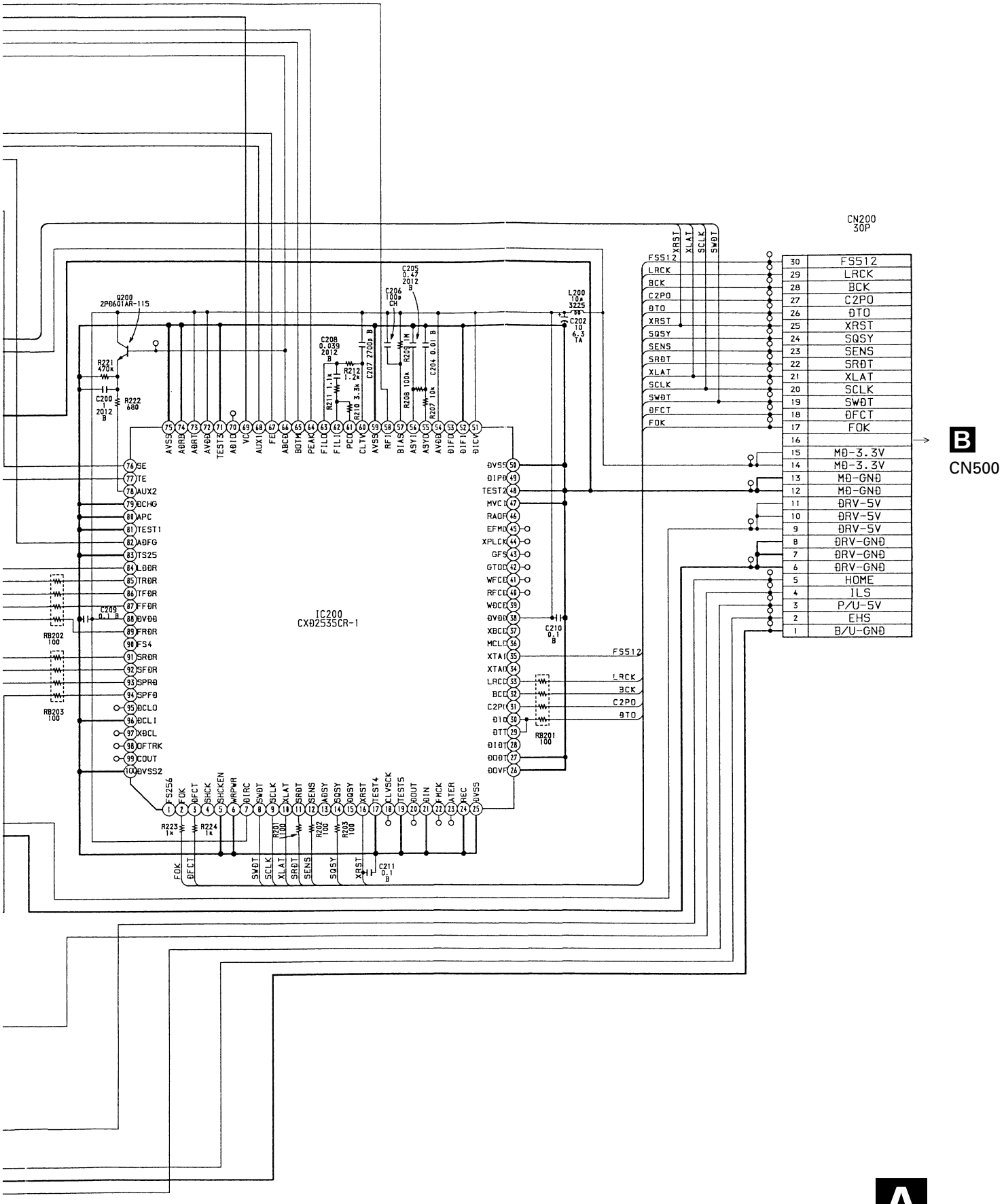
3. SCHEMATIC DIAGRAM

3.1 SERVO PCB ASSY

A SERVO PCB ASSY

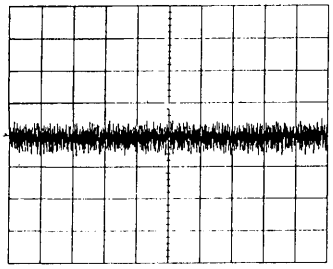


Note: When ordering service parts, be sure to refer to “EXPLODED VIEWS AND PARTS LIST” or “ELECTRICAL PARTS LIST”.

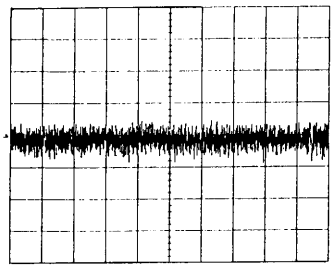


● Waveforms

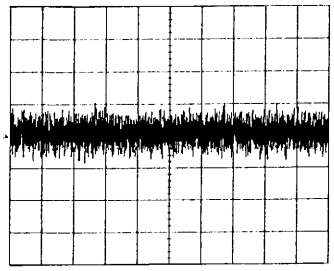
❶ IC100 ② (A) PLAY MODE
Approx. 200mVp-p, 500 μs



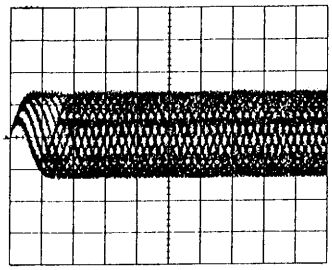
❷ IC100 ⑥ (E) PLAY MODE
Approx. 100mVp-p, 500 μs



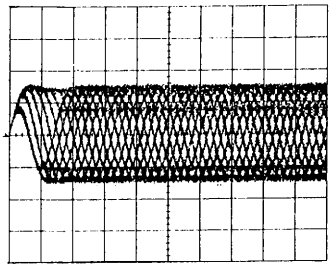
❸ IC100 ⑦ (F) PLAY MODE
Approx. 100mVp-p, 500 μs



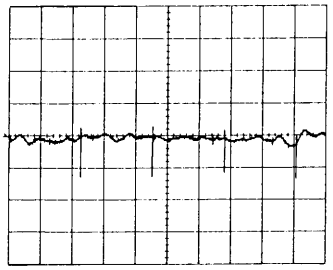
❹ IC100 ㊼, ㊽ (J, I) PLAY MODE
Approx. 200mVp-p, 1 μs



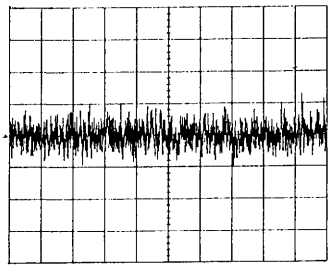
❺ IC100 ㊶ (RF) PLAY MODE
Approx. 500mVp-p, 1 μs



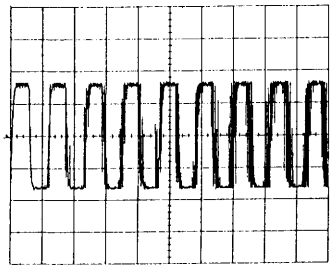
❻ IC100 ㉟ (FE) PLAY MODE
Approx. 1Vp-p, 500 μs



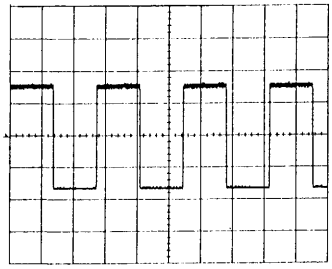
❼ IC100 ㉖ (TE) PLAY MODE
Approx. 200mVp-p, 5 μs



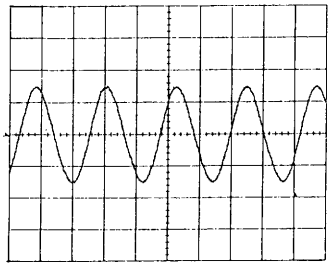
❽ IC200 ㊹ (XPLCK)
1Vp-p, 200ns



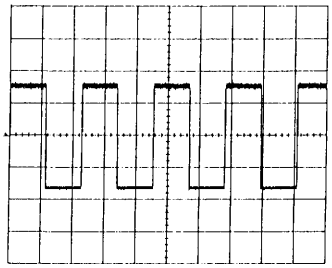
❾ IC200 ㊶ (WFCK)
1Vp-p, 50 μs



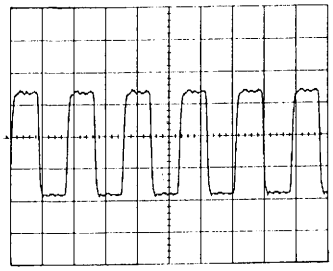
❿ IC200 ㉟ (XTAI)
3Vp-p, 22.5792MHz



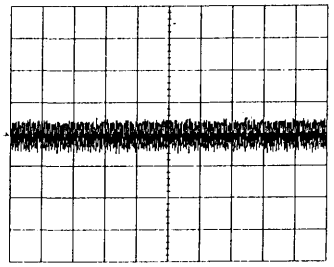
⓫ IC200 ㉝ (LRCK)
1Vp-p, 10 μs



⓬ IC200 ㉜ (BCK)
1Vp-p, 2 μs



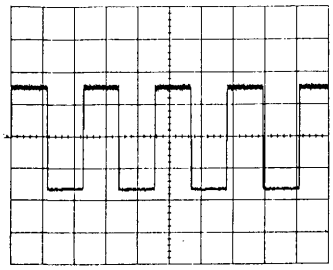
⓭ IC200 ㉒ (FMCK)
100mVp-p, 2 μs



3.2 MAIN PCB

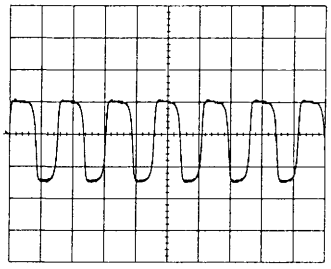
● Waveforms

❶ IC500 ㊿ (LRCK)
1Vp-p, 10 μs

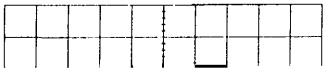


❷ IC500 ㊶ (BCK)
20mVp-p, 2 μs

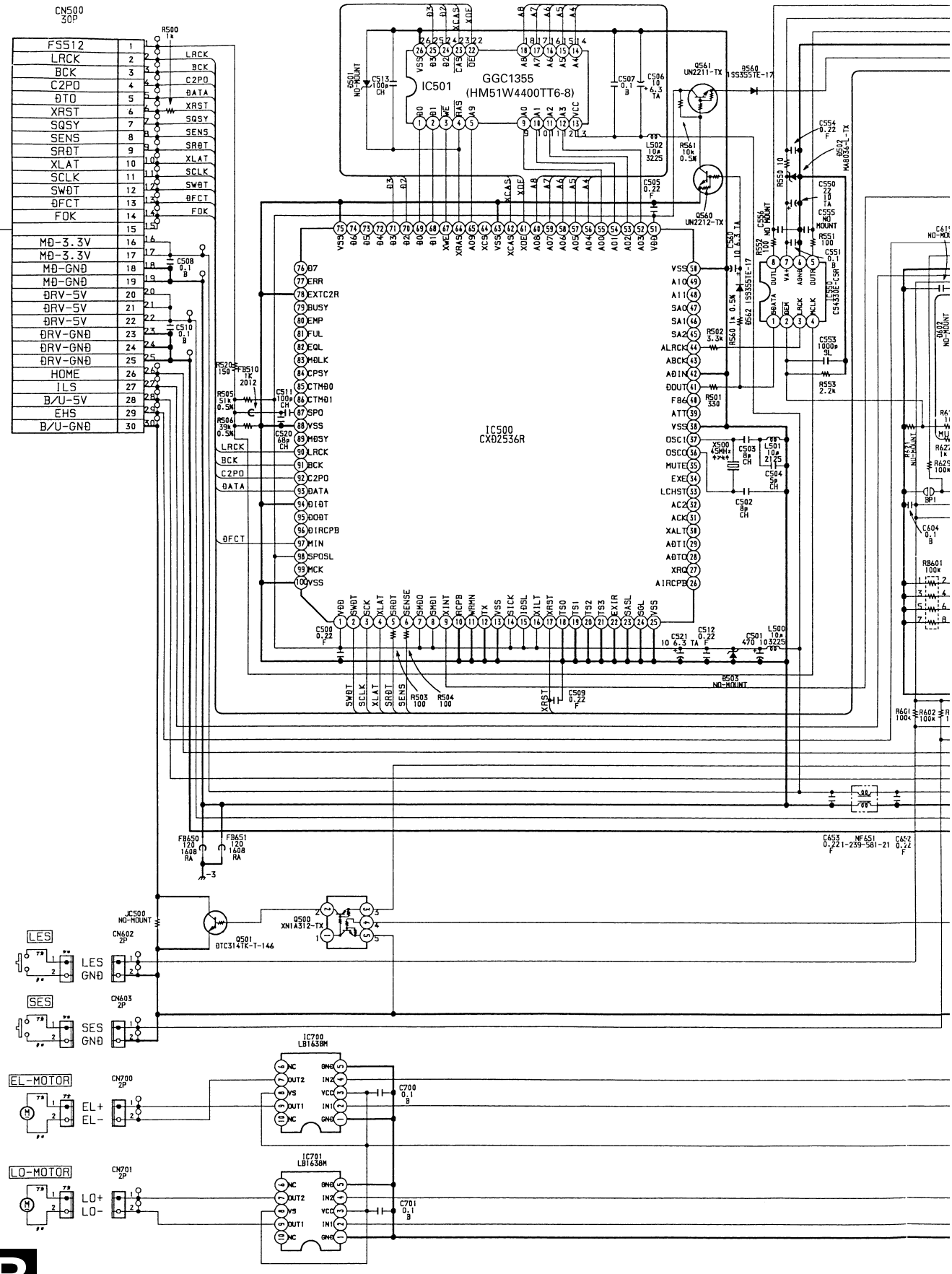
❻ IC600 ㉞ (TX)
5.2Vp-p, 32.768kHz

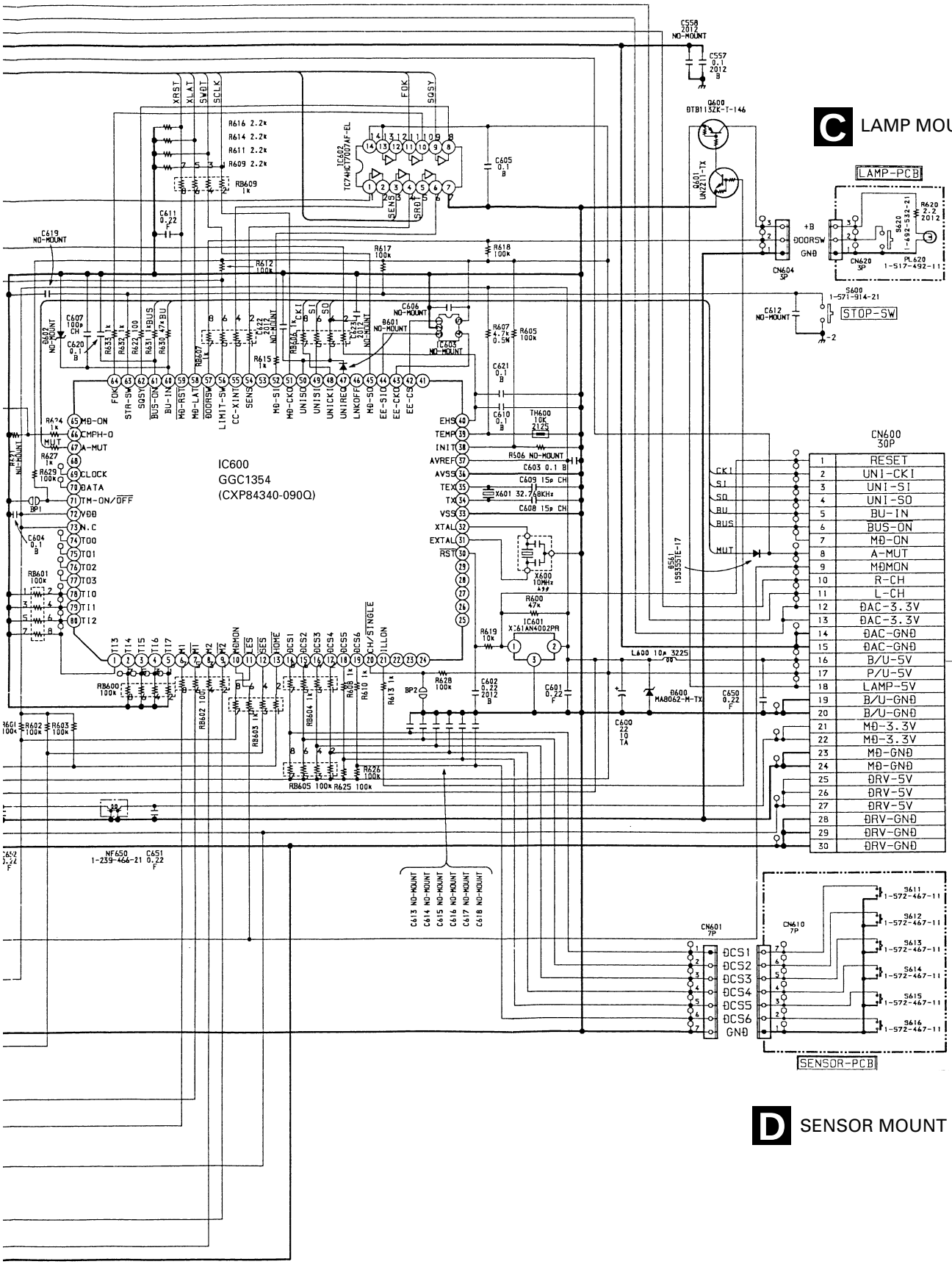


❼ IC600 ㉜ (XTAL)
4.2Vp-p, 10MHz

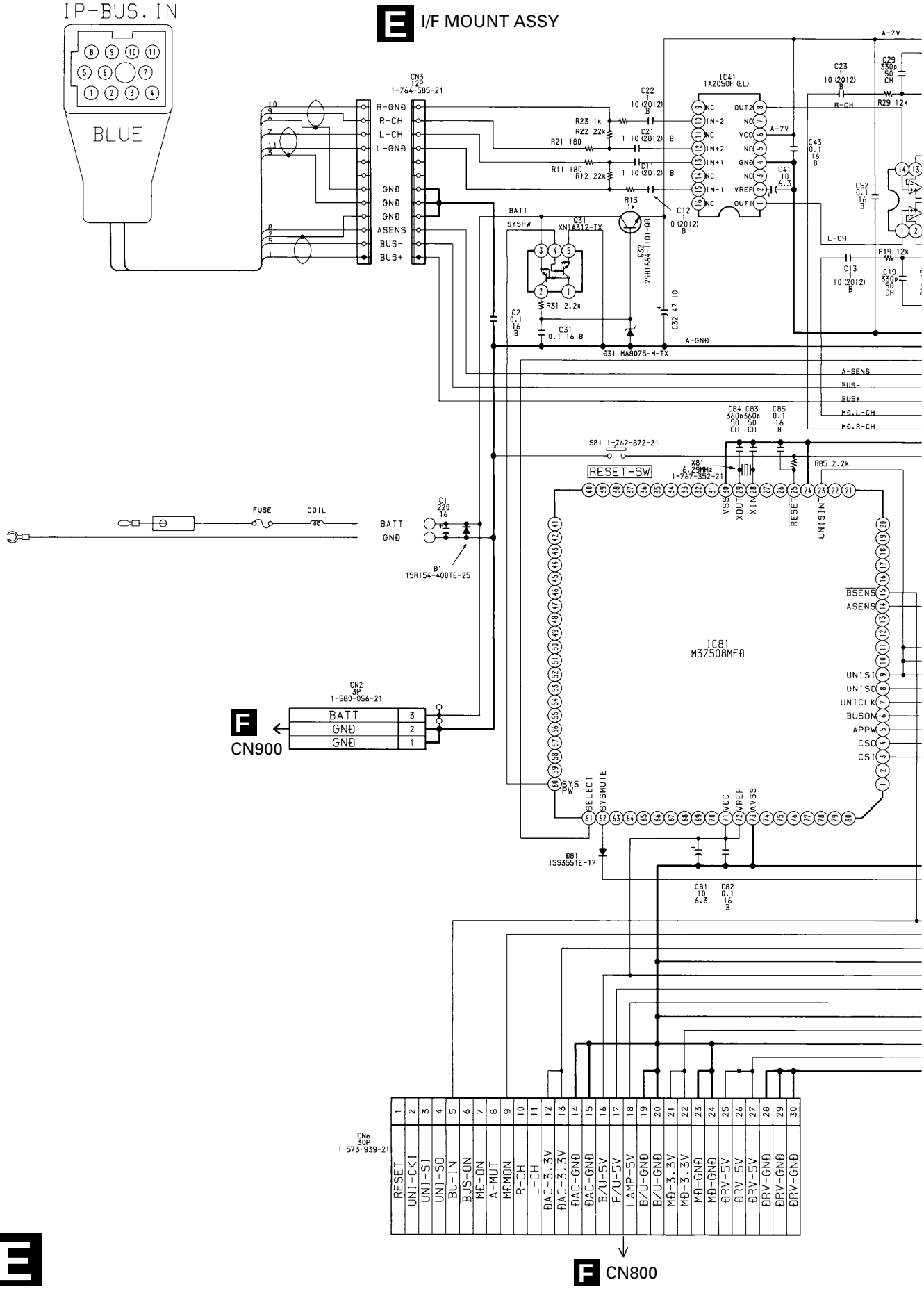


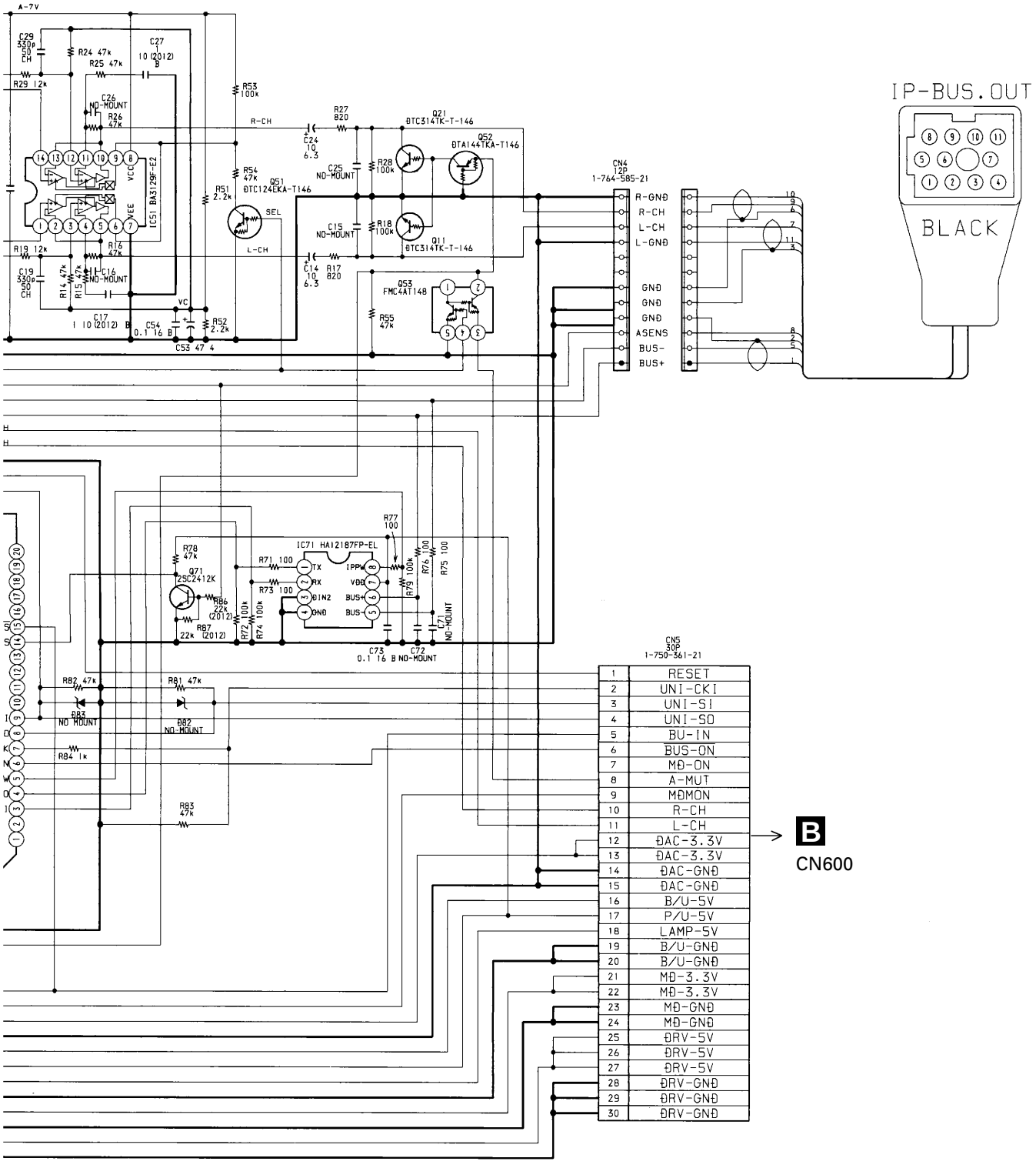
B MAIN PCB


CN500
30P
FS512
LRCK
BCK
C2PO
DATA
XRST
SQSY
SENS
SRDT
XLAT
SCLK
SWDT
DFCT
FOK
MD-3.3V
MD-3.3V
MD-GND
MD-GND
DRV-5V
DRV-5V
DRV-5V
DRV-GND
DRV-GND
DRV-GND
HOME
ILS
B/U-5V
EHS
B/U-GND
A
CN200
IC501
GGC1355
(HM51W4400TT6-8)
IC500
CXD2536R
Q561
UN2211-TX
Q560
UN2212-TX
Q500
XN1A312-TX
Q501
DTC314TK-T-146
LES
LES GND
SES
SES GND
EL-MOTOR
EL+
EL-
LO-MOTOR
LO+
LO-
IC700
LB1638M
IC701
LB1638M


C LAMP MOUNT PCB
LAMP-PCB
STOP-SW
IC600
GGC1354
(CXP84340-090Q)
CN600
30P
1 RESET
2 UNI-CKI
3 UNI-SI
4 UNI-SO
5 BU-IN
6 BUS-ON
7 MD-ON
8 A-MUT
9 MDMON
10 R-CH
11 L-CH
12 DAC-3.3V
13 DAC-3.3V
14 DAC-GND
15 DAC-GND
16 B/U-5V
17 P/U-5V
18 LAMP-5V
19 B/U-GND
20 B/U-GND
21 MD-3.3V
22 MD-3.3V
23 MD-GND
24 MD-GND
25 DRV-5V
26 DRV-5V
27 DRV-5V
28 DRV-GND
29 DRV-GND
30 DRV-GND
E CN5
CN601
7P
DCS1
DCS2
DCS3
DCS4
DCS5
DCS6
GND
CN610
7P
SENSOR-PCB
D SENSOR MOUNT PCB

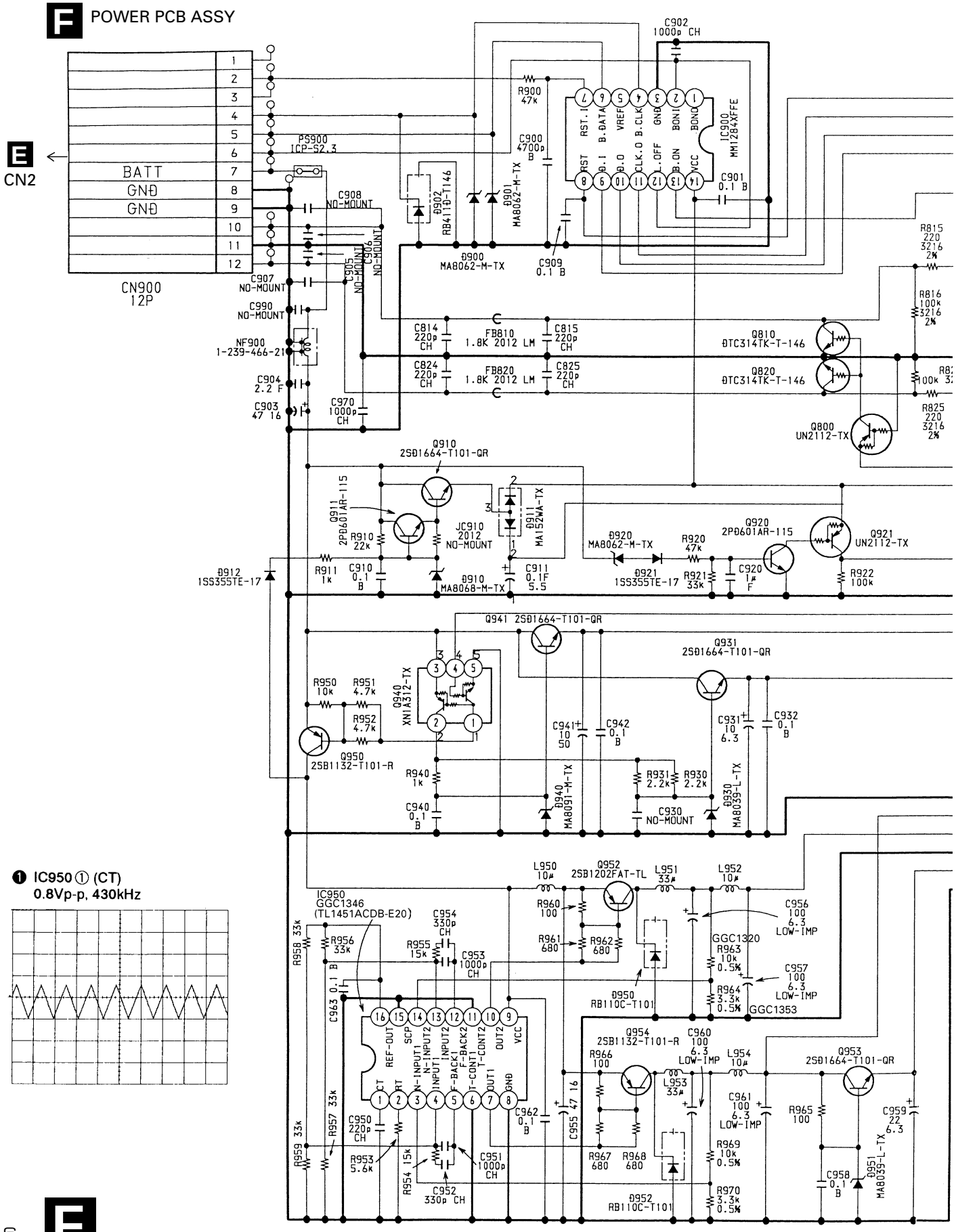
3.3 I/F MOUNT ASSY



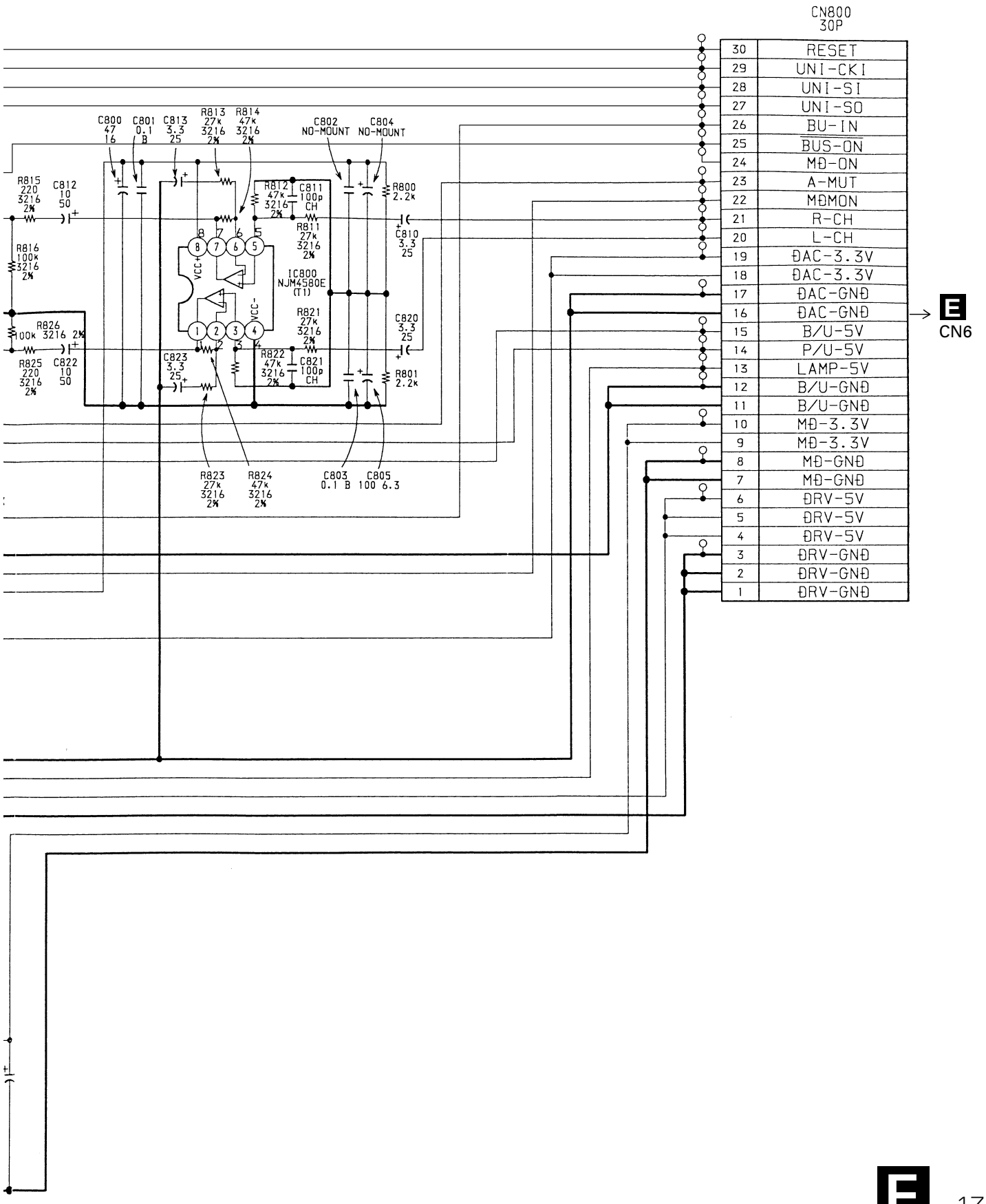

IP-BUS.OUT
BLACK
CN4
12P
1-764-585-21
R-GND
R-CH
L-CH
L-GND
GND
GND
GND
ASENS
BUS-
BUS+
CN5
30P
1-750-561-21
1 RESET
2 UNI-CKI
3 UNI-SI
4 UNI-SO
5 BU-IN
6 BUS-ON
7 MD-ON
8 A-MUT
9 MDMON
10 R-CH
11 L-CH
12 DAC-3.3V
13 DAC-3.3V
14 DAC-GND
15 DAC-GND
16 B/U-5V
17 P/U-5V
18 LAMP-5V
19 B/U-GND
20 B/U-GND
21 MD-3.3V
22 MD-3.3V
23 MD-GND
24 MD-GND
25 DRV-5V
26 DRV-5V
27 DRV-5V
28 DRV-GND
29 DRV-GND
30 DRV-GND
B
CN600
IC51 BA3129F-E2
IC71 HA12187FP-EL
Q51 DTC124EKA-T146
Q21 DTC314TK-T-146
Q52 DTA144TKA-T146
Q11 DTC314TK-T-146
Q53 FMC4AT148
Q71 2SC2412K

3.4 POWER PCB ASSY

F POWER PCB ASSY



❶ IC950 ① (CT)
0.8Vp-p, 430kHz

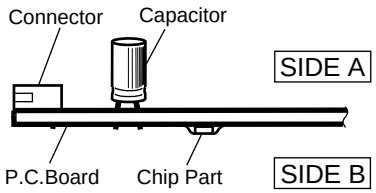

CN800
30P
30 RESET
29 UNI-CKI
28 UNI-SI
27 UNI-SO
26 BU-IN
25 BUS-ON
24 MD-ON
23 A-MUT
22 MDMON
21 R-CH
20 L-CH
19 DAC-3.3V
18 DAC-3.3V
17 DAC-GND
16 DAC-GND
15 B/U-5V
14 P/U-5V
13 LAMP-5V
12 B/U-GND
11 B/U-GND
10 MD-3.3V
9 MD-3.3V
8 MD-GND
7 MD-GND
6 DRV-5V
5 DRV-5V
4 DRV-5V
3 DRV-GND
2 DRV-GND
1 DRV-GND
E
CN6
C800 47 16
C801 0.1 B
C813 3.3 25
R813 27k 3216 2%
R814 47k 3216 2%
C802 NO-MOUNT
C804 NO-MOUNT
R815 220 3216 2%
C812 10 50
R816 100k 3216 2%
R826 100k 3216 2%
R825 220 3216 2%
C822 10 50
R812 47k 3216 2%
C811 100p CH
R811 27k 3216 2%
R800 2.2k
C810 3.3 25
IC800 NJM4580E (T1)
VCC+
VCC-
R821 27k 3216 2%
C820 3.3 25
R822 47k 3216 2%
C821 100p CH
R801 2.2k
C823 3.3 25
R823 27k 3216 2%
R824 47k 3216 2%
C803 0.1 B
C805 100 6.3

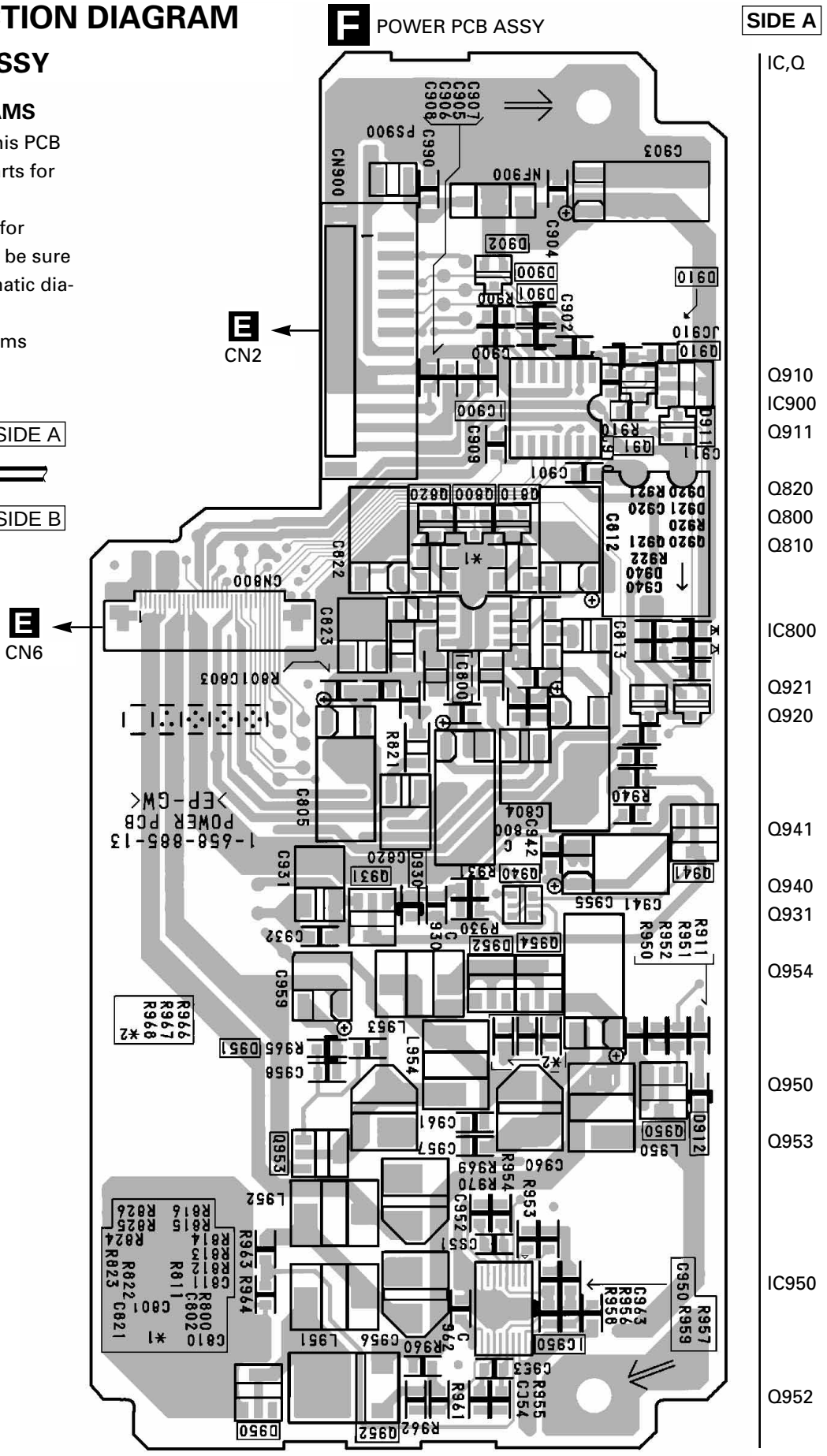
4. PCB CONNECTION DIAGRAM

4.1 POWER PCB ASSY

NOTE FOR PCB DIAGRAMS

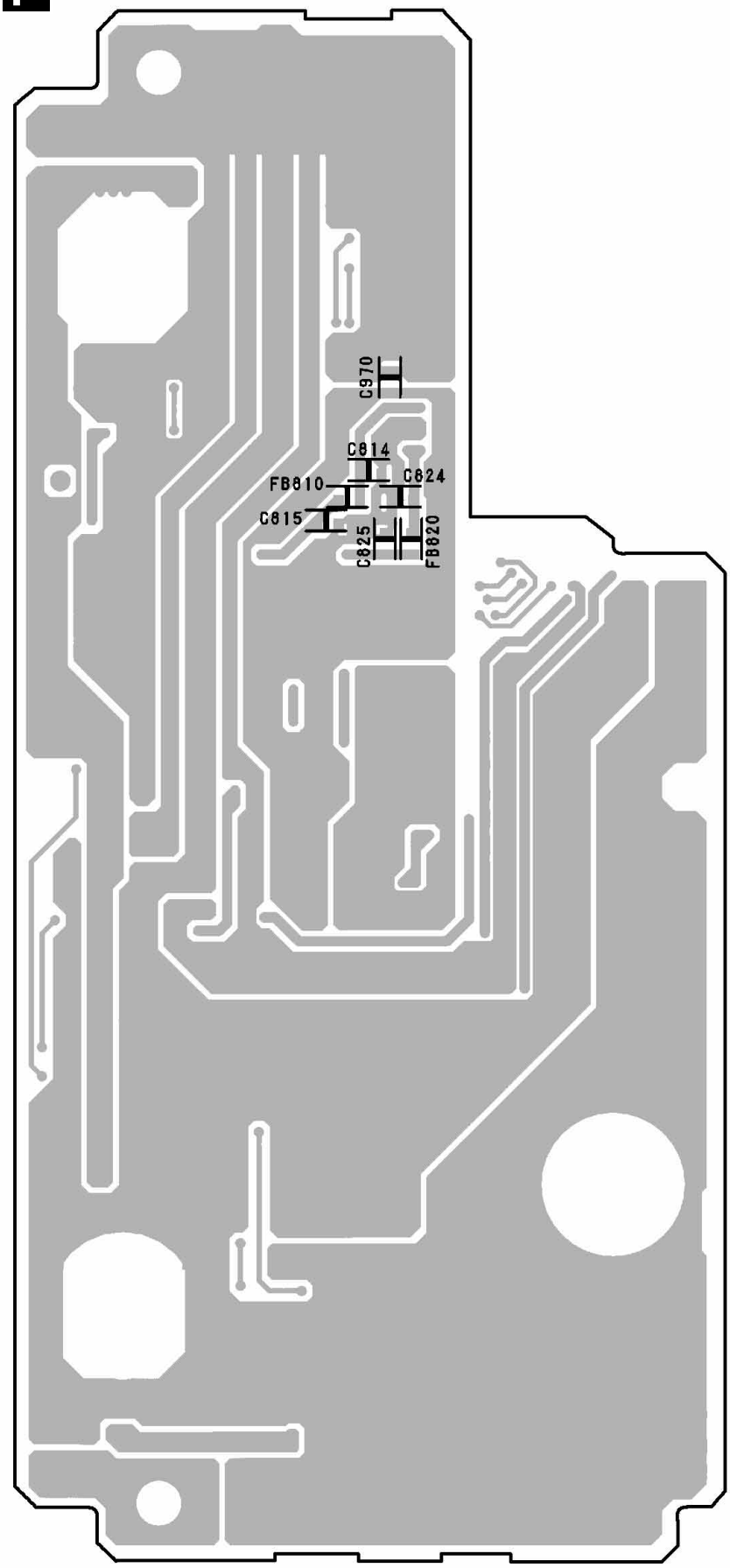
1. The parts mounted on this PCB include all necessary parts for several destination.
   For further information for respective destinations, be sure to check with the schematic diagram.
2. Viewpoint of PCB diagrams





F POWER PCB ASSY

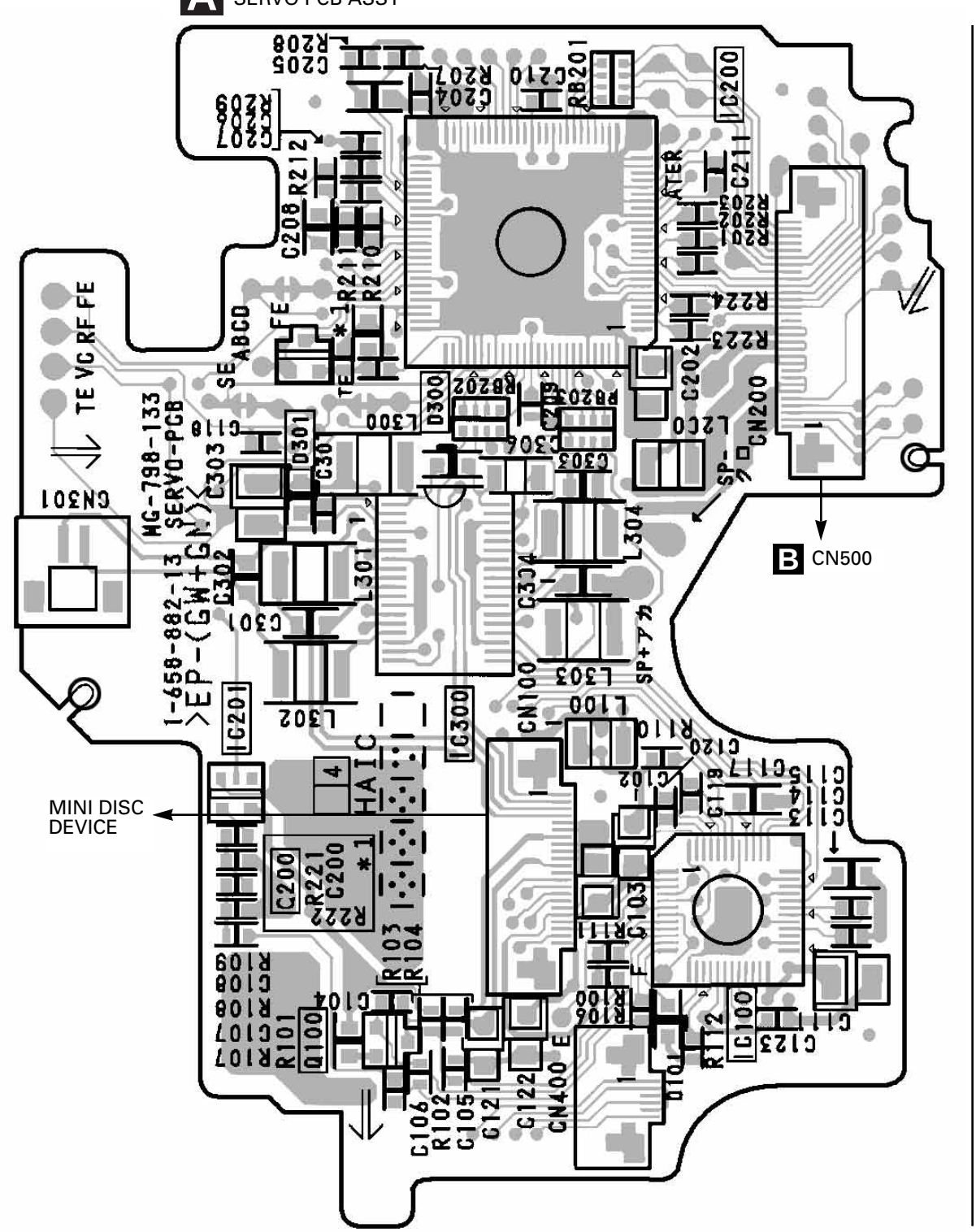
SIDE B



4.2 SERVO PCB ASSY

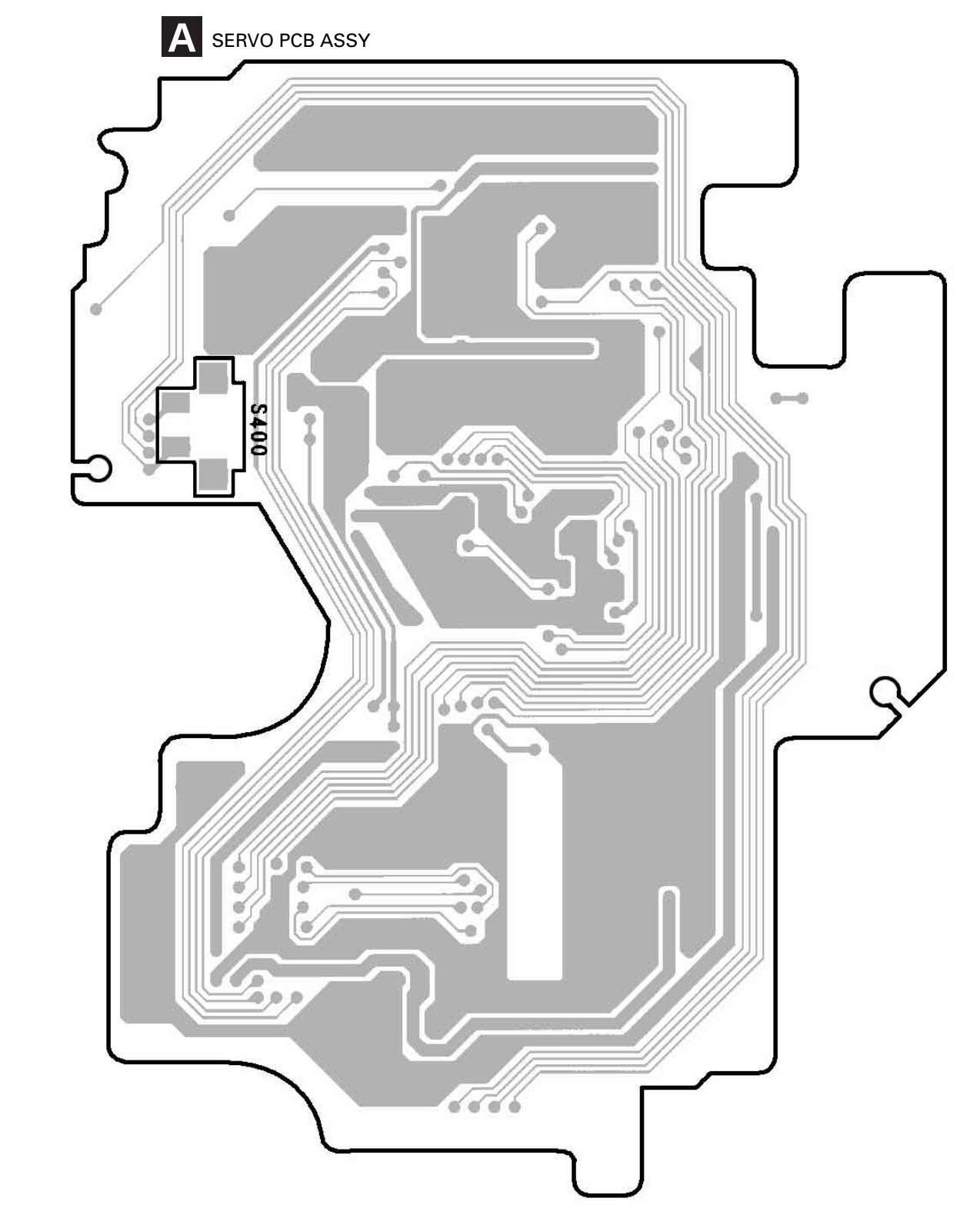
SIDE A

A SERVO PCB ASSY

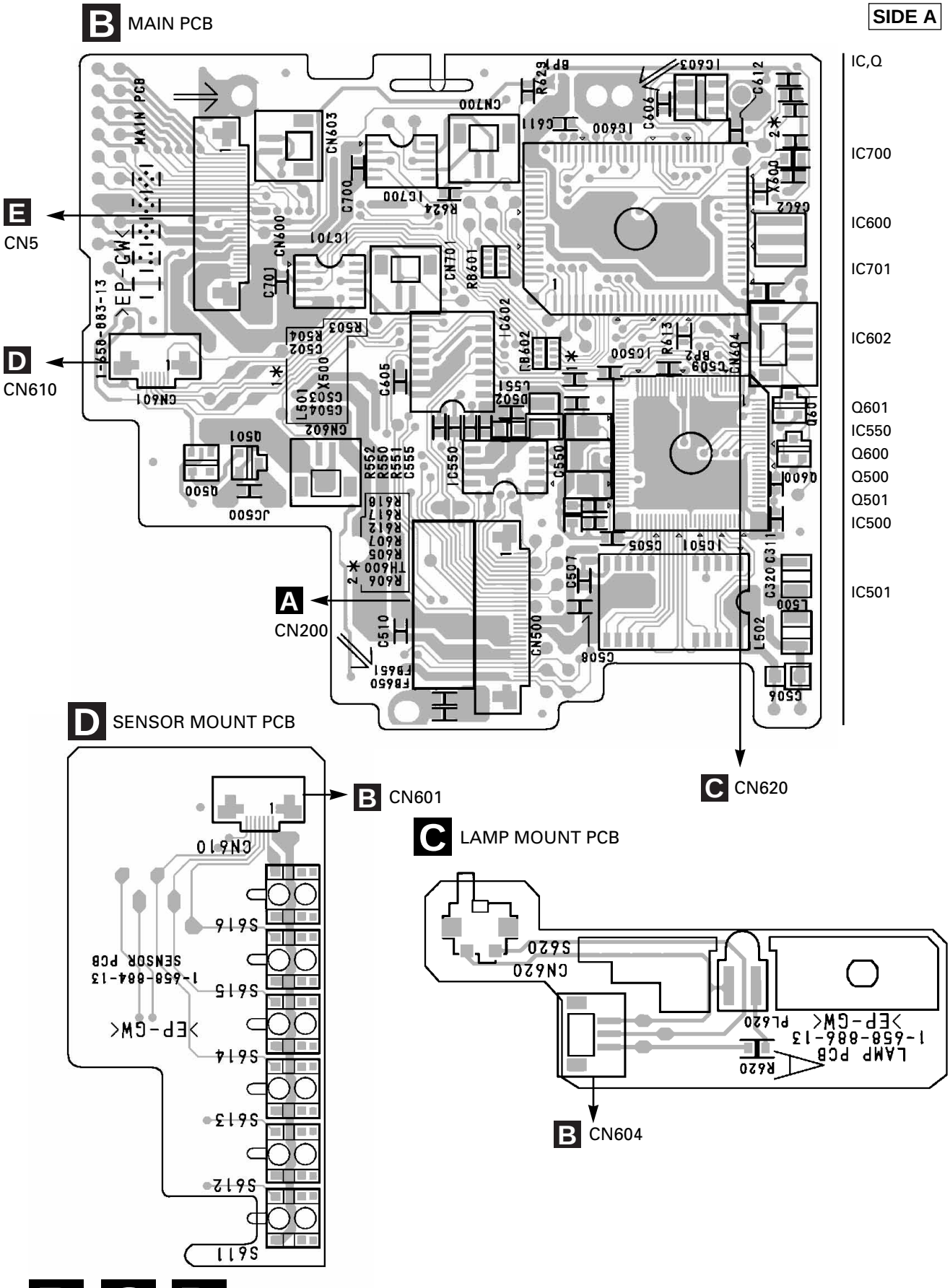


SIDE B

A SERVO PCB ASSY

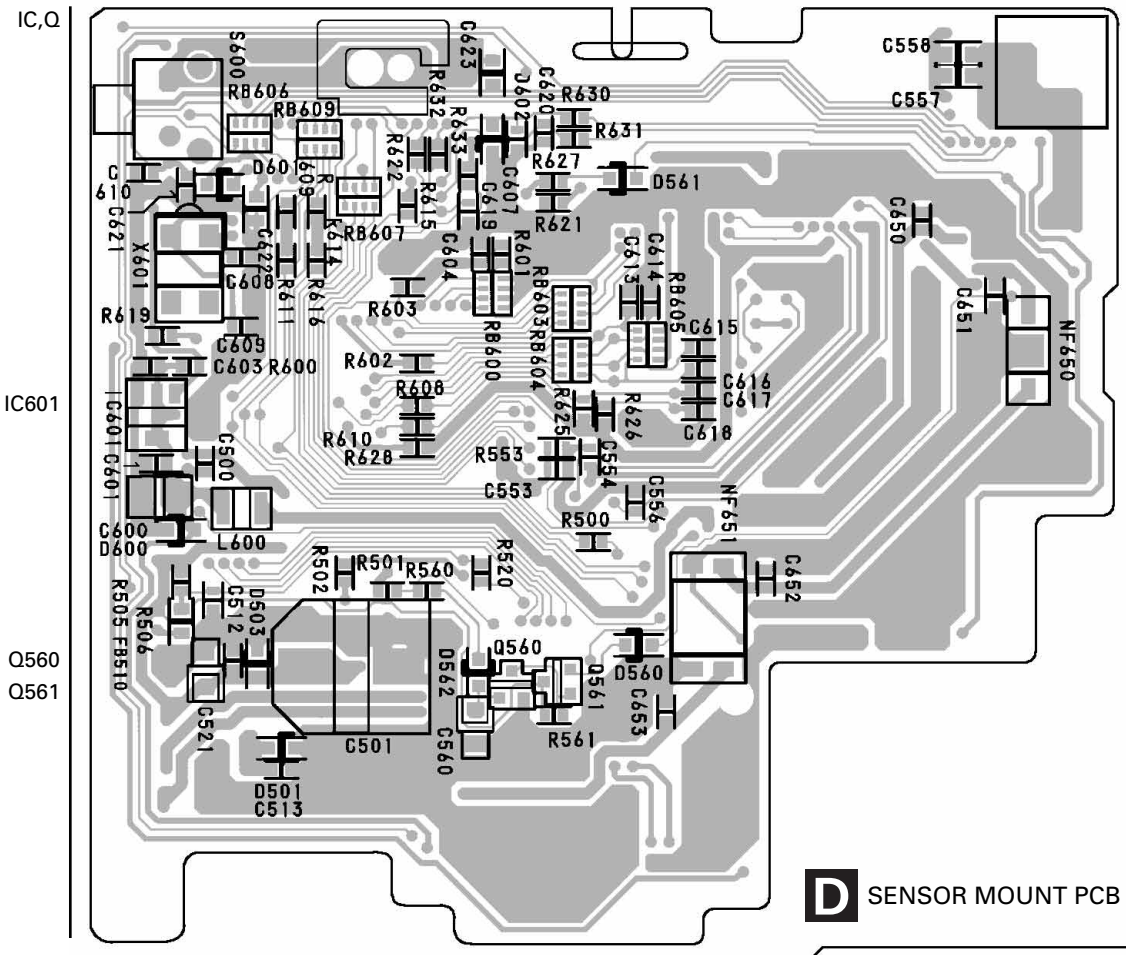


4.3 MAIN PCB, LAMP MOUNT PCB, SENSOR MOUNT PCB

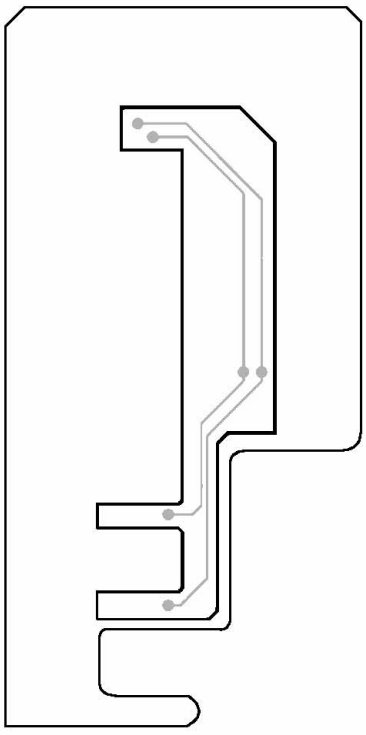


SIDE B

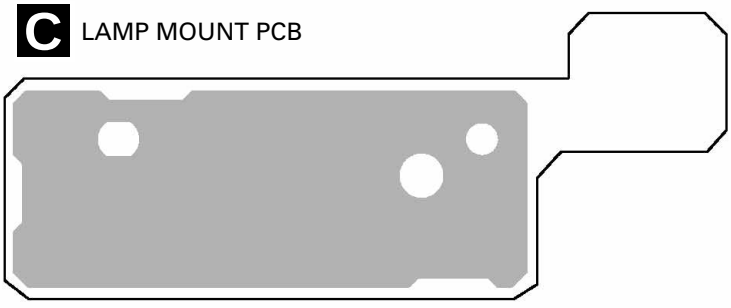
B MAIN PCB



D SENSOR MOUNT PCB



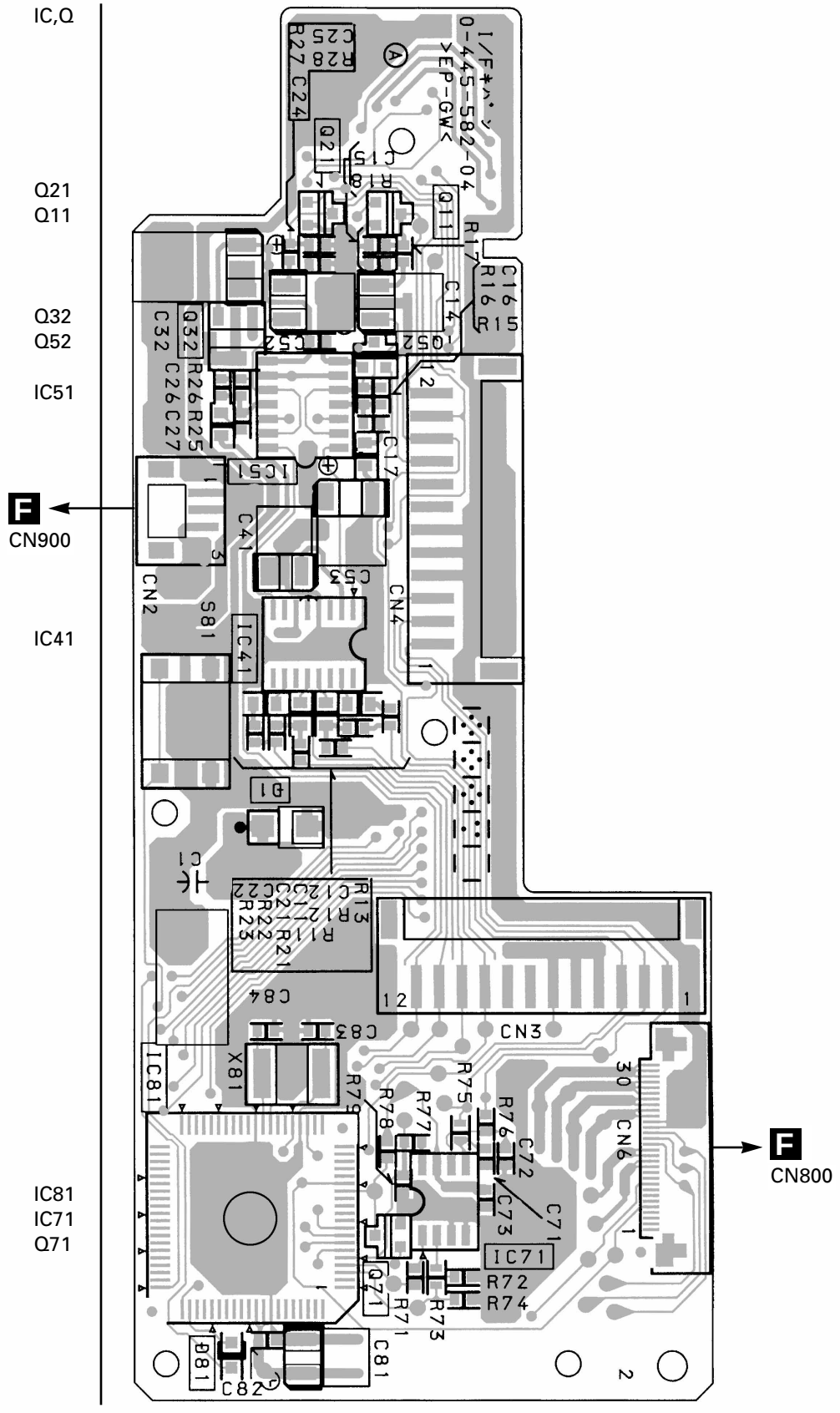
C LAMP MOUNT PCB



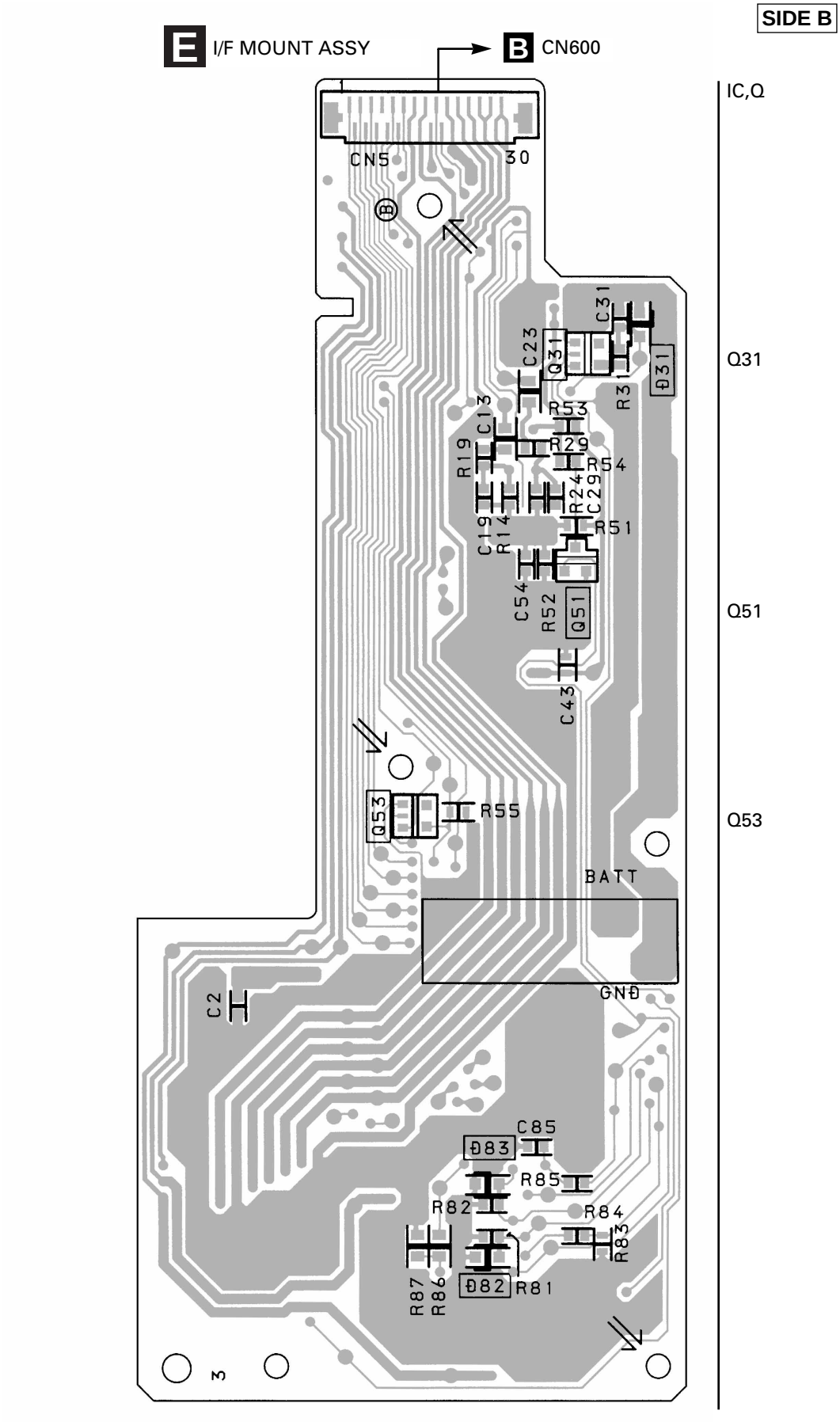
4.4 I/F MOUNT ASSY

SIDE A

E I/F MOUNT ASSY



SIDE B


E I/F MOUNT ASSY
B CN600
CN5
30
IC,Q
Q31
Q51
Q53
C31
C23
Q31
D31
R31
R53
C13
R19
R29
R54
R24
C29
C19
R14
R51
C54
R52
Q51
C43
Q53
R55
BATT
GND
C2
C85
D83
R85
R82
R84
R83
R87
R86
D82
R81

5. ELECTRICAL PARTS LIST

NOTES:

● Parts whose parts numbers are omitted are subject to being not supplied.

● The part numbers shown below indicate chip components.

Chip Resistor

RS1/○S○○○J,RS1/○○S○○○J

Chip Capacitor (except for CQS.....)

CKS....., CCS....., CSZS.....

Circuit Symbol and No.		Part Name	Part No.
E Unit Number :			
Unit Name : I/F Mount Assy			
MISCELLANEOUS			
IC	41	IC	TA2050F
IC	51	IC	BA3129F
IC	71	IC	HA1287FP
IC	81	IC	PD5403B
Q	11	Transistor	DTC314TK
Q	21	Transistor	DTC314TK
Q	31	Transistor	XN1A312-TX
Q	32	Transistor	2SD1664
Q	51	Transistor	DTC124EK
Q	52	Transistor	DTA144TKA
Q	53	Transistor	FMC4A
Q	71	Transistor	2SC2412K
D	1	Diode	1SR154-400
D	31	Diode	MA8075(M)
D	81	Diode	1SS355
X	81	Radiator 6.29MHz	CZS3048
S	81	Keyboard Switch	CZS3046
CN	2	Connector	CZK3059
CN	3	Connector	CZK3058
CN	4	Connector	CZK3058
CN	5	Connector	CZK3064
CN	6	Connector	CZK3057
RESISTORS			
R	11		RS1/16S181J
R	12		RS1/16S223J
R	13		RS1/16S102J
R	14		RS1/16S473J
R	15		RS1/16S473J
R	16		RS1/16S473J
R	17		RS1/16S821J
R	18		RS1/16S104J
R	19		RS1/16S123J
R	21		RS1/16S181J
R	22		RS1/16S223J
R	23		RS1/16S102J
R	24		RS1/16S473J
R	25		RS1/16S473J
R	26		RS1/16S473J
R	27		RS1/16S821J
R	28		RS1/16S104J
R	29		RS1/16S123J
R	31		RS1/16S222J
R	51		RS1/16S222J
R	52		RS1/16S222J
R	53		RS1/16S104J
R	54		RS1/16S473J
R	55		RS1/16S473J
R	71		RS1/16S101J
R	72		RS1/16S104J
R	73		RS1/16S101J
R	74		RS1/16S104J
R	75		RS1/16S101J
R	76		RS1/16S101J
R	77		RS1/16S101J
R	78		RS1/16S473J
R	79		RS1/16S104J
R	81		RS1/16S473J
R	82		RS1/16S473J
R	83		RS1/16S473J
R	84		RS1/16S102J
R	85		RS1/16S222J
R	86		RS1/10S223J
R	87		RS1/10S223J
CAPACITORS			
C	1		CZC5144
C	2		CZC5142
C	11		CZC5146
C	12		CZC5146
C	13		CZC5143
C	14		CZC5148
C	15		CCSRCH361J50
C	17		CZC5146
C	19		CZC5167
C	21		CZC5146
C	22		CZC5146
C	23		CZC5143
C	24		CZC5148
C	25		CCSRCH361J50
C	27		CZC5146
C	29		CZC5167
C	31		CZC5142
C	32		CZC5149
C	41		CZC5148
C	43		CZC5142
C	52		CZC5145
C	53		CZC5147
C	54		CZC5142
C	73		CZC5145
C	81		CZC5148
C	82		CZC5145
C	83		CZC5166
C	84		CZC5166
C	85		CZC5142
A Unit Number : CZW3054			
Unit Name : Servo PCB Assy			
MISCELLANEOUS			
IC	100	IC	CXA1981AR
IC	200	IC	CXD2535CR-1
IC	201	IC	SC7S04F
IC	300	IC	MPC17A38VMEL
Q	100	Transistor	2SA1037K

=====Circuit Symbol and No.		===Part Name	Part No.
Q	200	Transistor	2SC2712
D	300	Diode	1SS355
D	301	Diode	1SS355
L	100	Inductor	CZT3086
L	200	Inductor	CZT3086
L	300	Micro-Inductor	CZT3085
L	301	Micro-Inductor	CZT3085
L	302	Micro-Inductor	CZT3085
L	303	Micro-Inductor	CZT3085
L	304	Micro-Inductor	CZT3085
S	400	Push Switch	CZS3041
RB	201	Chip Network Resistor	CZC5119
RB	202	Chip Network Resistor	CZC5119
RB	203	Chip Network Resistor	CZC5119
CN	100	Connector	CZK3048
CN	200	Connector	CZK3047
CN	301	Connector Pin 2P	CZK3045
CN	400	Connector	CZK3046

RESISTORS

R	100		RS1/16S473J
R	101		RS1/10S4R7J
R	102		RS1/16S151J
R	103		RS1/16S474J
R	104		RS1/16S472J
R	106		RS1/16S474J
R	107		RS1/16S222J
R	108		RS1/16S222J
R	109		RS1/16S222J
R	110		RS1/16S153J
R	111		RS1/16S473J
R	201		RS1/16S101J
R	202		RS1/16S101J
R	203		RS1/16S101J
R	207		RS1/16S103J
R	208		RS1/16S104J
R	209		RS1/16S105J
R	210		RS1/16S332J
R	211		RS1/16S112J
R	212		RS1/16S122J
R	221		RS1/16S474J
R	222		RS1/16S681J
R	223		RS1/16S102J
R	224		RS1/16S102J

CAPACITORS

C	102		CZC5123
C	103		CZC5123
C	104		CKSRYB102K50
C	105		CKSRYB682K25
C	106		CKSRYB223K25
C	107		CKSRYB103K25
C	108		CKSRYB103K25
C	111		CZC5120
C	113		CZC5122
C	114		CKSRYB103K25
C	115		CKSQYB105K10
C	117		CKSQYB105K10
C	118		CKSRYB472K50
C	119		CKSRYB682K25
C	120		CKSRYB473K16
C	123		CZC5122
C	200		CKSQYB105K10
C	202		CZC5123
C	204		CKSRYB103K25
C	205		CKSQYB474K16
C	206		CCSRCH101J50
C	207		CKSRYB272K50
C	208		CKSQYB393K25
C	209		CZC5122
C	210		CZC5122

=====Circuit Symbol and No.		===Part Name	Part No.
C	211		CZC5122
C	301		CKSQYB105K10
C	302		CKSQYB105K10
C	303		CZC5121
C	304		CKSQYB105K10
C	305		CKSQYB105K10
C	306		CZC5122
C	307		CZC5122

B Unit Number : CZW3057
Unit Name : Main PCB

MISCELLANEOUS

IC	500	IC	CXD2536R
IC	501	IC(HM51W4400TT6-8)	GGC1355
IC	550	IC	CS4330E-CSR
IC	600	IC(CXP84340-090Q)	GGC1354
IC	601	IC	XC61AN4002PR
IC	602	IC TC74HCT7007AF(EL)	
IC	700	IC	LB1638M
IC	701	IC	LB1638M
Q	500	Transistor	XN1A312-TX
Q	501	Transistor	DTC314TK
Q	560	Transistor	UN2212
Q	561	Transistor	UN2211
Q	600	Transistor	DTB113ZK
Q	601	Transistor	UN2211
D	502	Diode	MA8036(L)
D	560	Diode	1SS355
D	561	Diode	1SS355
D	562	Diode	1SS355
D	600	Diode	MA8062(M)
L	500	Inductor	CZT3088
L	501	Inductor	CZT3087
L	502	Inductor	CZT3088
L	600	Inductor	CZT3090
TH	600	Thermister	CZC5125
X	500	Crystal Oscillator 45MHz	CZS3043
X	600	Ceramic Oscillator 10MHz	CZS5124
X	601	Crystal Oscillator 32.768kHz	CZS3044
S	600	Keyboard Switch	CZS3045
FB	510	Inductor	CZT3091
FB	650	Ferrite Chip	CZT3089
FB	651	Ferrite Chip	CZT3089
NF	650	EMI Filter	CZC5137
NF	651	EMI Filter	CZC5138
RB	600	Resistor	CZC5136
RB	601	Resistor	CZC5165
RB	602	Resistor	CZC5127
RB	603	Resistor	CZC5135
RB	604	Resistor	CZC5135
RB	605	Resistor	CZC5136
RB	606	Resistor	CZC5135
RB	607	Resistor	CZC5135
RB	609	Resistor	CZC5135
CN	500	Connector	CZK3050
CN	600	Connector	CZK3052
CN	601	Connector	CZK3051
CN	602	Connector Pin	CZK3053
CN	603	Connector Pin	CZK3053
CN	604	Connector Pin	CZK3056
CN	700	Connector Pin	CZK3055
CN	701	Connector Pin	CZK3054

RESISTORS

R	500		RS1/16S102J
R	501		RS1/16S331J
R	502		RS1/16S332J
R	503		RS1/16S101J
R	504		RS1/16S101J

=====Circuit Symbol and No.		===Part Name	Part No.
R	505		CZC5134
R	506		CZC5133
R	520		RS1/16S151J
R	550		RS1/16S100J
R	551		RS1/16S101J
R	552		RS1/16S101J
R	553		RS1/16S222J
R	560		CZC5131
R	561		CZC5132
R	600		RS1/16S473J
R	601		RS1/16S104J
R	602		RS1/16S104J
R	603		RS1/16S104J
R	605		RS1/16S104J
R	607		CZC5126
R	608		RS1/16S102J
R	609		RS1/16S222J
R	610		RS1/16S102J
R	611		RS1/16S222J
R	612		RS1/16S104J
R	613		RS1/16S102J
R	614		RS1/16S222J
R	615		RS1/16S102J
R	616		RS1/16S222J
R	617		RS1/16S104J
R	618		RS1/16S104J
R	619		RS1/16S103J
R	622		RS1/16S101J
R	624		RS1/16S102J
R	625		RS1/16S104J
R	626		RS1/16S104J
R	627		RS1/16S102J
R	628		RS1/16S104J
R	629		RS1/16S104J
R	630		RS1/16S473J
R	631		RS1/16S102J
R	632		RS1/16S102J
R	633		RS1/16S102J

CAPACITORS

C	500		CKSRYF224Z16
C	501		CZC5140
C	502		CCSRCH5R0C50
C	503		CKSRYB103K25
C	504		CCSRCH5R0C50
C	505		CKSRYF224Z16
C	506		CZC5130
C	507		CZC5129
C	508		CZC5129
C	509		CKSRYF224Z16
C	510		CZC5129
C	511		CCSRCH101J50
C	512		CKSRYF224Z16
C	513		CCSRCH101J50
C	520		CCSRCH680J50
C	521		CZC5141
C	550		CZC5128
C	551		CZC5129
C	553		CCSRSL102J50
C	554		CKSRYF224Z16
C	557		CKSQYB104K16
C	560		CZC5141
C	600		CZC5164
C	601		CKSRYF224Z16
C	602		CKSQYB224K16
C	603		CZC5139
C	604		CZC5139
C	605		CZC5129
C	607		CCSRCH101J50
C	608		CCSRCH150J50

=====Circuit Symbol and No.		===Part Name	Part No.
C	609		CCSRCH150J50
C	610		CZC5139
C	611		CKSRYF224Z16
C	620		CZC5139
C	621		CZC5139
C	650		CKSRYF224Z16
C	651		CKSRYF224Z16
C	652		CKSRYF224Z16
C	653		CKSRYF224Z16
C	700		CZC5129
C	701		CZC5129

F Unit Number : CZW3061
Unit Name : Power PCB Assy

MISCELLANEOUS

IC	800	IC	NJM4580E
IC	900	IC	MM1284XFFE
IC	950	IC(TL1451ACDB-E20)	GGC1346
Q	800	Transistor	UN2112
Q	810	Transistor	DTC314TK
Q	820	Transistor	DTC314TK
Q	910	Transistor	2SD1664
Q	911	Transistor	2SD601A
Q	920	Transistor	2SD601A
Q	921	Transistor	UN2112
Q	931	Transistor	2SD1664
Q	940	Transistor	XN1A312-TX
Q	941	Transistor	2SD1664
Q	950	Transistor	2SB1115A-YQ
Q	952	Transistor	2SB1202FAST
Q	953	Transistor	2SD1664
Q	954	Transistor	2SB1115A-YQ
D	900	Diode	MA8062(M)
D	901	Diode	MA8062(M)
D	902	Diode	RB411D
D	910	Diode	MA8068(M)
D	911	Diode	MA152WA
D	912	Diode	1SS355
D	920	Diode	MA8062(M)
D	921	Diode	1SS355
D	930	Diode	MA8039(L)
D	940	Diode	MA8091(M)
D	950	Diode	RB110C
D	951	Diode	MA8039(L)
D	952	Diode	RB110C
L	950	Coil	CZT3093
L	951	Coil	CZT3092
L	952	Coil	CZT3093
L	953	Coil	CZT3092
L	954	Coil	CZT3093
FB	810	Inductor	CZT3094
FB	820	Inductor	CZT3094
NF	900	EMI Filter	CZC5150
PS	900	IC Link	CZE3029
CN	800	Connector	CZK3062
CN	900	Connector	CZK3061

RESISTORS

R	800		RS1/10S222J
R	801		RS1/10S222J
R	811		CZC5160
R	812		CZC5161
R	813		CZC5160
R	814		CZC5161
R	815		CZC5159
R	816		CZC5162
R	821		CZC5160
R	822		CZC5161

=====Circuit Symbol and No.		===Part Name	Part No.
R	823		CZC5160
R	824		CZC5161
R	825		CZC5159
R	826		CZC5162
R	900		RS1/10S473J
R	910		RS1/10S223J
R	911		RS1/10S102J
R	920		RS1/10S473J
R	921		RS1/10S333J
R	922		RS1/10S104J
R	930		RS1/10S222J
R	931		RS1/10S222J
R	940		RS1/10S102J
R	950		RS1/10S103J
R	951		RS1/10S472J
R	952		RS1/10S472J
R	953		RS1/10S562J
R	954		RS1/10S153J
R	955		RS1/10S153J
R	956		RS1/10S333J
R	957		RS1/10S333J
R	958		RS1/10S333J
R	959		RS1/10S333J
R	960		RS1/10S101J
R	961		RS1/10S681J
R	962		RS1/10S681J
R	963	(RN1/10SE1002D)	GGC1320
R	964	(RN1/10SE3301D)	GGC1353
R	965		RS1/10S101J
R	966		RS1/10S101J
R	967		RS1/10S681J
R	968		RS1/10S681J
R	969		RN1/10SE1002D
R	970		RN1/10SE3301D

CAPACITORS

C	415		CCSQCH221J50
C	800		CZC5154
C	801		CKSQYB104K16
C	803		CKSQYB104K16
C	805		CZC5153
C	810		CZC5155
C	811		CCSQCH101J50
C	812		CZC5156
C	813		CZC5155
C	814		CCSQCH221J50
C	820		CZC5155
C	821		CCSQCH101J50
C	822		CZC5156
C	823		CZC5155
C	824		CCSQCH221J50
C	825		CCSQCH221J50
C	900		CKSQYB472K50
C	901		CKSQYB104K16
C	902		CCSQCH102J50
C	903		CZC5154

=====Circuit Symbol and No.		===Part Name	Part No.
C	904		CZC5158
C	909		CKSQYB104K16
C	910		CKSQYB104K16
C	911		CZC5163
C	920		CKSQYF105Z16
C	931		CZC5151
C	932		CKSQYB104K16
C	940		CKSQYB104K16
C	941		CZC5156
C	942		CKSQYB104K16
C	950		CCSQCH221J50
C	951		CCSQCH102J50
C	952		CCSQCH331J50
C	953		CCSQCH102J50
C	954		CCSQCH331J50
C	955		CZC5154
C	956		CZC5157
C	957		CZC5157
C	959		CZC5152
C	960		CZC5157
C	961		CZC5157
C	962		CKSQYB104K16
C	963		CKSQYB104K16
C	970		CCSQCH102J50
C	989		CKSQYB104K16

C Unit Number :
Unit Name : Lamp Mount PCB

MISCELLANEOUS

S	620	Push Switch	CZS3047
PL	620	Pilot Lamp	CZE3030
CN	620	Connector Pin	CZK3063

RESISTORS

R	620		RS1/10S2R2J

D Unit Number :
Unit Name : Sensor Mount PCB

S	611	Push Switch	CZS3042
S	612	Push Switch	CZS3042
S	613	Push Switch	CZS3042
S	614	Push Switch	CZS3042
S	615	Push Switch	CZS3042
S	616	Push Switch	CZS3042
CN	610	Connector	CZK3049

Miscellaneous Parts List

	SL Motor Assy	CZX3020
	SP Motor	CZX3019
	Slide Variable resistor	CZC5118
	Switch	CZS3040
	Switch	CZS3038
	Switch	CZS3039
	Mini Disc Device	CZG3005
	LD Motor Assy	CZX3076
	ELV Motor Assy	CZX3077

6. ADJUSTMENT

There is no information to be shown in this chapter.

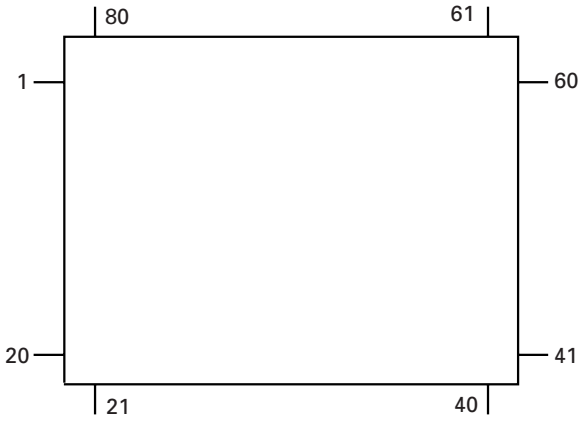
7. GENERAL INFORMATION

7.1 IC

● **Pin Functions(PD5403B)**

Pin No.	Pin Name	I/O	Function and Operation
1	NC		OPEN
2	SYSRST	O	System reset output for MD(Not used)
3	CSI	I	IP-BUS data input
4	CSO	O	IP-BUS data output
5	APPW	O	IP-BUS driver power supply control
6	BUSON	O	Unilink BUS ON control output
7	UNICLK	O	Unilink SCK output
8	UNISO	O	Unilink DATA output
9	UNISI	I	Unilink DATA input
10-13	NC		OPEN
14	$\overline{\text{ASENS}}$	I	Acc sense input
15	BSENS	I	Back Up sense input
16-22	NC		OPEN
23	UNISINT	I	Unilink DATA interrupt input
24	GND	I	GND
25	$\overline{\text{RESET}}$	I	Reset input
26, 27	NC		OPEN
28	XIN	I	Crystal oscillator connection pin
29	XOUT	O	Crystal oscillator connection pin
30	VSS		GND
31-59	NC		OPEN
60	SYSPW	O	Power supply control output of analog SW
61	SELECT	O	IP-BUS audio line select control output
62	SYSMUTE	O	System mute output
63-70	NC		OPEN
71	VCC		VDD(Back Up +5V)
72	VREF	I	Reference voltage input for A/D
73	AVSS	I	GND for A/D
74-80	NC		OPEN

*PD5403B

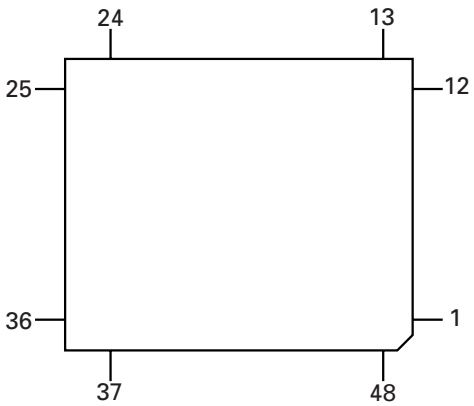


IC's marked by* are MOS type.
Be careful in handling them because they are very liable to be damaged by electrostatic induction.

● **Pin Functions(CXA1981AR)**

Pin No.	Pin Name	I/O	Function and Operation
1	VC	O	Output terminal for the center point voltage (1/2 VCC) generated
2-7	A-F	I	Signal input from detector circuit in the optical pick-up block
8	FI	I	Signal input of the operational amplifier for F signal
9	FO	O	Signal output of the operational amplifier for F signal
10	PD	I	Front monitor Connected to the photo diode
11	APCREF	I	Input terminal for the setting of laser power
12	TEMPI	I	Terminal for the connection to temperature sensor Not used this set (OPEN)
13	GND		Ground terminal
14	AAPC	O	LD amplifier output terminal of APC circuit
15	DAPC	O	Not used (OPEN)
16	TEMPR	O	Output terminal of the reference voltage for temperature sensor Not used this set (OPEN)
17	$\overline{\text{XRST}}$	I	Reset signal input from the system controller (IC600) When reset : "L"
18	SWDT	I	Write data signal input from the system controller (IC600)
19	SCLK	I	Clock signal input from the system controller (IC600)
20	XLAT	I	Latch signal input from the system controller (IC600)
21	VREF	O	Reference voltage output Not used this set (OPEN)
22	TENV	O	Not used (OPEN)
23	THLD	I	Not used (OPEN)
24	VCC		Power supply terminal (+3.3V)
25	TFIL	I	Not used (OPEN)
26	TE	O	Tracking error signal output to CXD2535CR (IC200)
27	TLB	I	Input terminal of the adder signal to tracking error Not used this set (OPEN)
28	CSLED	I	Terminal for the sled error lowpass filter
29	SE	O	Sled error signal output to CXD2535CR (IC200)
30	ADFM	O	FM signal output terminal of the ADIP
31	ADIN	I	Input terminal by AC coupling is FM signal of the ADIP
32	ADAGC	I	External capacitor connect terminal for AGC of the ADIP
33	ADFG	O	ADIP double turned FM signal output to CXD2535CR (IC200) (22.05kHz ±1kHz)
34	AUX	O	Sub signal output to CXD2535CR (IC200)
35	FE	O	Focus error signal output to CXD2535CR (IC200)
36	FLB	I	Input terminal of the adder signal to focus error Not used this set (OPEN)
37	ABCD	O	Light amount signal output to CXD2535CR (IC200)
38	BOTM	O	Light amount bottom hold signal output to CXD2535CR (IC200)
39	PEAK	O	Light amount peak hold signal output to CXD2535CR (IC200)
40	PFAGC	I	External capacitor connect terminal of AGC circuit for the RF
41	RF	O	Playback EFM RF signal output to CXD2535CR (IC200)
42	ISET	I	Setting terminal for the internal circuit constant 22kHz,BPF center frequency
43	AGCI	I	Input terminal by AC coupling is RF signal
44	RFO	O	RF signal output terminal
45	MORFI	I	Input terminal by AC coupling is RF signal of the MO
46	MORFO	O	RF signal output terminal of the MO
47,48	I,J	I	Signal input from detector circuit in the optical pick-up block

CXA1981AR



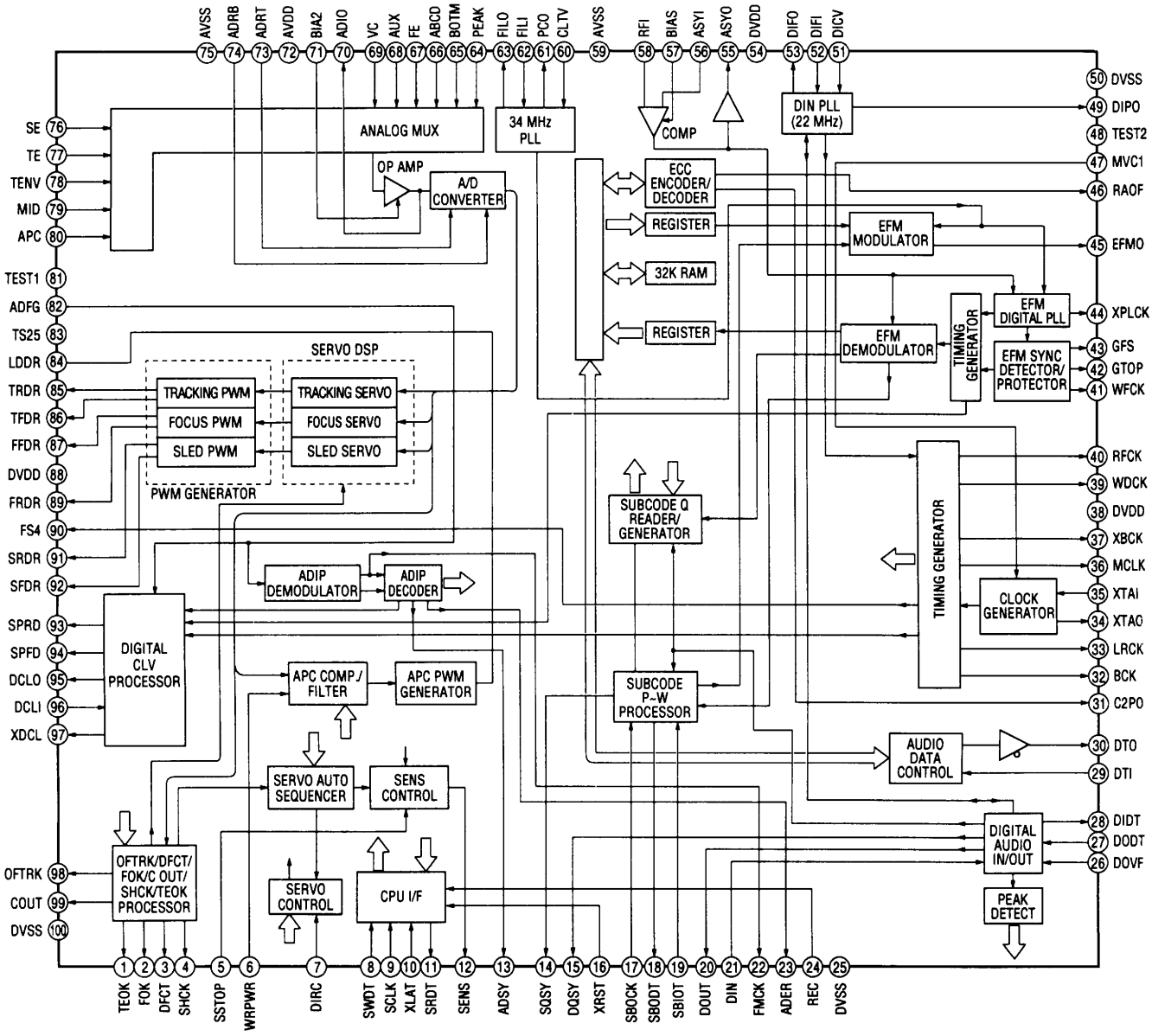
● **Pin Functions(CXD2535CR-1)**

Pin No.	Pin Name	I/O	Function and Operation
1	FS256	O	11.2896MHz clock signal output (MCLK system) Not used this set (OPEN)
2	FOK	O	Focus OK signal output to the system controller (IC600) "H" is output when the focus is applied
3	DFCT	O	Defect ON/OFF selection signal output to CXD2536CR (IC500)
4	SHCK	O	Track jump detection signal output to the system controller Not used this set (OPEN)
5	SHCKEN	I	Track jump detection enable input Not used this set (Fixed at "L")
6	WRPWR	I	Laser power selection signal input from the system controller Not used this set (Fixed at "L")
7	DIRC	I	Not used this set (Fixed at "H")
8	SWDT	I	Write data signal input from the system controller (IC600)
9	SCLK	I	Serial clock signal input from the system controller (IC600)
10	XLAT	I	Serial latch signal input from the system controller (IC600)
11	SRDT	O	Read data signal output to the system controller (IC600)
12	SENS	O	Internal status (SENS) output to the system controller (IC600)
13	ADSY	O	ADIP sync signal output Not used this set (OPEN)
14	SQSY	O	Sub-code Q sync (SCOR) output to the system controller (IC600) "L" every 13.3msec,Almost "H"
15	DQSY	O	Digital in U-bit CD format sub-code Q sync (SCOR) output to the system controller (IC600) "L" every 13.3msec,Almost "H"
16	$\overline{\text{XRST}}$	I	Reset signal input from the system controller (IC600) When reset "L"
17	TEST4	I	Test input terminal (Fixed at "L")
18	CLVSCK	O	Not used this set (OPEN)
19	TEST5	I	Test input terminal (Fixed at "L")
20	DOUT	O	Output terminal of the digital audio signal (for optical out) Not used this set (OPEN)
21	DIN	I	Input terminal of the digital audio signal (for optical out) Not used this set (Fixed at "L")
22	FMCK	O	FM modulation clock signal output of the ADIP Not used this set (OPEN)
23	$\overline{\text{ATER}}$	O	ADIP CRC flag output When error "H" Not used this set (OPEN)
24	REC	I	Record/playback selection signal input When recording :"H", when playback:"L" (Fixed at "L")
25	DVSS		Ground terminal (Digital system)
26	DOVF	I	Validity flag input terminal for the digital audio out Not used this set (Fixed at "L")
27	DODT	I	Input terminal of 16-bit data signal for the digital audio out Not used this set (Fixed at "L")
28	DIDT	O	Output terminal of 16-bit data signal for the digital audio in Not used this set (OPEN)
29	DTI	I	Record audio data signal input from CXD2536CR (IC500)
30	DTO	O	Playback audio data signal output to CXD2536CR (IC500)
31	C2PO	O	C2PO (indicate the error state of the data) signal output to CXD2536AR (IC500) Playback:C2PO ("H"), Digital recording:D.In-Vflag,Analog recording:"L"
32	BCK	O	Bit clock (2.8224MHz) signal output to CXD2536CR (IC500) (MCLK system)
33	LRCK	O	L/R clock (44.1kHz) signal output to CXD2536CR (IC500) (MCLK system)
34	XTAO	O	System clock (512Fs=22.5792MHz) signal output Not used this set (OPEN)
35	XTAI	I	System clock (512Fs=22.5792MHz) signal input from CXD2536CR (IC500)
36	MCLK	O	MCLK clock (22.5792MHz) signal output Not used this set (OPEN)
37	XBCK	O	BCK (pin 32)inverted output Not used this set (OPEN)
38	DVDDO		Power supply terminal (+3.3V) (Digital system)
39	WDCK	O	WDCK clock (88.2kHz) signal output (MCLK system) Not used this set (OPEN)
40	RFCK	O	RFCK clock (7.35kHz) signal output (MCLK system) Not used this set (OPEN)
41	WFCK	O	WFCK clock (7.35kHz) signal output (When playback:EFM decoder PLL system, When recoding:EFM encoder PLL system) Not used this set (OPEN)
42	GTOP	O	Opens the playback EFM frame sync protection window when "H" Not used set (OPEN)
43	$\overline{\text{GFS}}$	O	The playback EFM frame sync and interpolation protection timing match when "H" Not used this set (OPEN)
44	XPLCK	O	EFM decoder PLL clock (98Fs=4.3218MHz) signal output Falling edge of the EFM PLL clock and the EFM signal match Not used this set (OPEN)

Pin No.	Pin Name	I/O	Function and Operation
45	EFMO	O	FM signal output (Whcn recoding) Not used this set (OPEN)
46	RAOF	O	Overflow detection signal output of the internal RAM (Decoder monitor out) RAOF is signal generated when the 32k RAM exceeds the ±4F jitter margin Not used this set (OPEN)
47	MVCI	I	Oscillation input for PLL of the digital in Not used this set (Fixed at "L")
48	TEST2	I	Test terminal input (Fixed at "L")
49	DIPD	O	Phase comparator output for PLL of the digital in When the internal VCO:Frequency;Low→"H" When the external VCO:Frequency;Low→"L" Not used this set (OPEN)
50	DVSS1		Ground terminal (Digital system)
51	DICV	I	Control voltage input terminal of the internal VCO for digital in PLL
52	DIFI	I	Filter input terminal of the internal VCO for digital in PLL Not used this set (Fixed at "L")
53	DIFO	O	Filter output terminal of the internal VCO for digital in PLL Not used this set (OPEN)
54	AVDD1		Power supply terminal (+3.3V) (Analog system)
55	ASYO	O	Playback EFM full-swing output (L=VSS,H=VDD)
56	ASYI	I	Playback EFM asymmetry comparate voltage input terminal
57	BIAS	I	Playback EFM asymmetry circuit constant current input terminal
58	RFI	I	Playback EFM RF signal input from CXA1981AR (IC100)
59	AVSS1		Ground terminal (Analog system)
60	CLTV	I	VCO control voltage input terminal of the PLL for decoder PLL master clock
61	PCO	O	Phase comparator output terminal of the PLL for decoder PLL master clock
62	FILI	I	Filter input terminal of the PLL for decoder PLL master clock
63	FILO	O	Filter output terminal of the PLL for decoder PLL master clock
64	PEAK	I	Light amount peak hold signal input from CXA1981AR (IC100)
65	BOTM	I	Light amount bottom hold signal input from CXA1981AR (IC100)
66	ABCD	I	Light amount signal input from CXA1981AR (IC100)
67	FE	I	Focus error signal input from CXA1981AR (IC100)
68	AUX1	I	Sub signal input from CXA1981AR (IC100)
69	VC	I	Center point voltage (1/2 VCC) input from CXA1981AR (IC100)
70	ADIO	O	Monitor output of the A/D converter input signal Not used this set (OPEN)
71	TEST3	I	Test input terminal (Fixed at "L")
72	AVDD2		Power supply terminal (+3.3V) (Analog system)
73	ADRT	I	A/D converter action limits (upper side) voltage input (Fixed at "H")
74	ADRB	I	A/D converter action limits (lower side) voltage input (Fixed at "L")
75	AVSS2		Ground terminal (Analog system)
76	SE	I	Sled error signal input from CXA1981AR (IC100)
77	TE	I	Tracking error signal input from CXA1981AR (IC100)
78	AUX2	I	Sub signal input terminal from CXA1981AR (IC100)
79	DCHG	I	Connected to the Ground
80	APC	I	Input terminal for the laser APC Not used this set (Fixed at "L")
81	TEST1	I	Test input terminal (Fixed at "L")
82	ADFG	I	ADIP double turned FM signal input from CXA1981AR (IC100) (22.05kHz ±1kHz) (TTL schmitt input)
83	TS25	I	Test input terminal (Fixed at "L")
84	LDDR	O	Laser APC signal output to CXA1981AR (IC100)
85	TRDR	O	Tracking servo drive signal output (-)
86	TFDR	O	Tracking servo drive signal output (+)
87	FFDR	O	Focus servo drive signal output (+)
88	DVDD1		Power supply terminal (+3.3V) (Digital system)
89	FRDR	O	Focus servo drive signal output (-)
90	FS4	O	176.4kHz clock signal output (MCLK system) Not used this set (OPEN)
91	SRDR	O	Sled servo drive signal output (+)
92	SFDR	O	Sled servo drive signal output (-)
93	SPRD	O	Spindle servo drive signal output (+)
94	SPFD	O	Spindle servo drive signal output (-)
95	DCLO	O	Not used (OPEN)

Pin No.	Pin Name	I/O	Function and Operation
96	DCLI	I	Not used (Fixed at "H")
97	XDCL	O	Not used (OPEN)
98	OFTRK	O	Offtrack signal output Not used this set (OPEN)
99	COUT	O	Traverse count signal output Not used this set (OPEN)
100	DVSS2		Ground terminal (Digital system)

CXD2535CR-1



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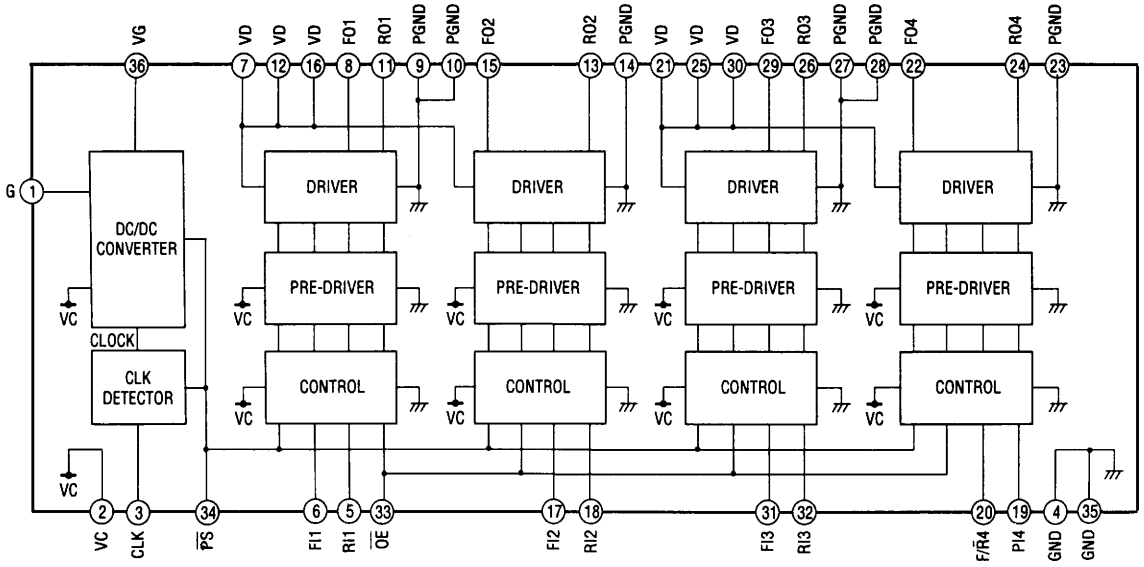


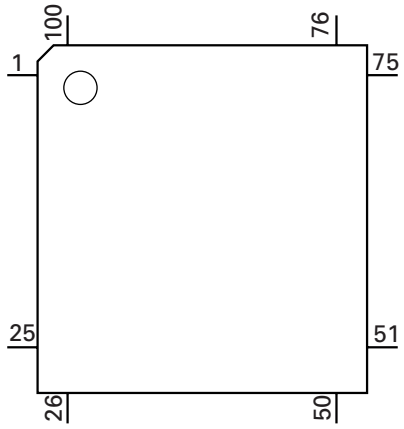
● Pin Functions(CXD2536R)

Pin No.	Pin Name	I/O	Function and Operation
1	VDD		Power supply terminal (+3.3V)
2	SWDT	I	Write data signal input from the system controller (IC600)
3	SCK	I	Serial clock signal input from the system controller (IC600)
4	XLAT	I	Serial latch signal input from the system controller (IC600)
5	SRDT	O	Read data signal output to the system controller (IC600)
6	SENSE	O	Internal status (SENSE) output to the system controller (IC600)
7	SMDO	I	Serial command control mode input from the system controller (Fixed at "H")
8	SMDI	I	Serial command control mode input from the system controller (Fixed at "H")
9	XINT	O	Interruption status output to the system controller (IC600)
10	RCPB	I	Record/playback selection signal input (Fixed at "L")
11	WRMN	I	Write/monitor mode selection signal input from the system controller (Fixed at "L")
12	TX	I	Writing data transmission timing input from the system controller Used together with the magnetic field head ON/OFF output (Fixed at "L")
13	VSS		Ground terminal
14	SICK	I	Chip reserve terminal (Fixed at "H")
15	IDSL	I	Chip reserve terminal (Fixed at "H")
16	XILT	I	Chip reserve terminal (Fixed at "H")
17	$\overline{\text{XRST}}$	I	Reset signal input from the system controller (IC600) When reset:"L"
18-21	TS0-TS3	I	Test input terminal (Fixed at "L")
22	EXIR	I	Chip reserve terminal (Fixed at "H")
23	SASL	I	Single use the block selection "L":ATRAC,"H":RAM controller (Fixed at "L")
24	SGL	I	Normally fixed at "L",Fixed at "H" when the ATRAC or RAM controller is single used (Fixed at "L")
25	VSS		Ground terminal
26	AIRCPB	O	Record/playback mode signal output terminal of the ATRAC or external audio block Not used this set (OPEN)
27	XRQ	I/O	XRQ signal input/output terminal of the ATRAC interface Not used this set (OPEN)
28	ADTO	I/O	Decoder data signal input/output terminal of the ATRAC Not used this set (OPEN)
29	ADTI	I/O	Encoder data signal input/output terminal of the ATRAC Not used this set (OPEN)
30	XALT	I/O	Data ready and XALT signal input/output terminal of the ATRAC interface Not used this set (OPEN)

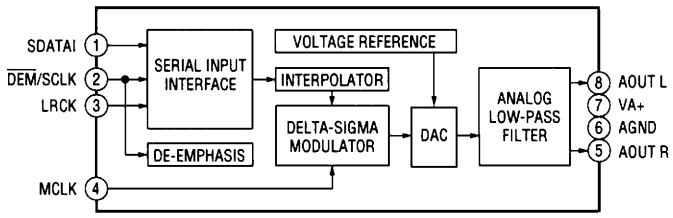
Pin No.	Pin Name	I/O	Function and Operation
31	ACK	I/O	ACK signal input/output terminal of the ATRAC interface Not used this set (OPEN)
32	AC2	I/O	Error data signal input/output terminal of the ATRAC interface Not used this set (OPEN)
33	LCHST	I/O	Lch Start data signal input/output terminal of the ATRAC interface Not used this set (OPEN)
34	EXE	I/O	EXE signal input/output terminal of the ATRAC interface Not used this set (OPEN)
35	MUTE	I/O	MUTE signal input/output terminal of the ATRAC interface Not used this set (OPEN)
36	OSCO	O	45.1584MHz clock oscillation output
37	OSCI	I	45.1584MHz clock oscillation input
38	VSS		Ground terminal
39	ATT	I/O	ATT signal input/output terminal of the ATRAC interface Not used this set (OPEN)
40	F86	O	11.6msec timing signal output terminal of the ATRAC block Not used this set (OPEN)
41	DOUT	O	Monitor/audio decode data signal output to the D/A converter (IC550)
42	ADIN	I	Recording data signal input Not used this set (Fixed at "L")
43	ABCK	O	Bit clock signal output Not used this set (OPEN)
44	ALRCK	O	L/R clock signal output to the D/A converter (IC550)
45-47	SA2-SA0	O	Address signal output Not used this set (OPEN)
48,49	A11,A10	O	Address signal output Not used this set (OPEN)
50	VSS		Ground terminal
51	VDD		Power supply terminal (+3.3V)
52-55	A03-A00	O	Address signal output to the RAM (IC501)
56-60	A04-A08	O	Address signal output to the RAM (IC501)
61	XOE	O	Output enable control signal output to the RAM (IC501)
62	XCAS	O	Column address strobe signal output to the RAM (IC501)
63	VSS		Ground terminal
64	XCS	O	Chip select signal output Not used this set (OPEN)
65	A09	O	Address signal output to the RAM (IC501)
66	XRAS	O	Row address strobe signal output to the RAM (IC501)
67	XWE	O	Reading/Writing control signal output to the RAM (IC501)
68,69	D1,D0	I/O	RAM (IC501) data bus
70,71	D2,D3	I/O	RAM (IC501) data bus
72-74	D4-D6	I/O	Data bus Not used this set (OPEN)
75	VSS		Ground terminal
76	D7	I/O	Data bus Not used this set (OPEN)
77	ERR	I/O	Input /output terminal of the error (C2PO) data signal to the external RAM Not used this set (OPEN)
78	EXTC2R	I	External RAM selection signal input for the error data writing (When"H":External RAM) (Fixed at "L")
79	BUSY	O	BUSY signal output of the RAM access Not used this set (OPEN)
80	EMP	O	Empty or before the full of the ATRAC data (When DSC=ASC+1:"H") Not used this set (OPEN)
81	FUL	O	Full or before the empty of the ATRAC data (When ASC=DSC+1:"H") Not used this set (OPEN)
82	EQL	O	Empty of the ATRAC data (When DSC=ASC:"H")
83	MDLK	O	Indicate the main/sub of the recording or playback data (When sub and linking:"H", When the main:"L") Not used this set (OPEN)
84	CPSY	O	Interpolation sync signal output Not used this set (OPEN)
85	CTMD0	O	DSC (Difference Signal Control) counter mode output Not used this set (OPEN)
86	CTMD1	O	DSC (Difference Signal Control) counter mode output Not used this set (OPEN)
87	SPO	O	System clock (512Fs=22.5792MHz) signal output to CXD2535CR (IC200) and D/A converter (IC550)
88	VSS		Ground terminal
89	MDSY	O	Sync detection signal output of the main data Not used this set (OPEN)
90	LRCK	I	L/R clock (44.1kHz) signal input from CXD2535CR (IC200)

Pin No.	Pin Name	I/O	Function and Operation
91	BCK	I	Bit clock (2.8224MHz) signal input from CXD2535CR (IC200)
92	C2PO	I	C2PO (indicate the error mode of the data) signal input from CXD2535BR (IC200) When playback:C2PO (“H”), When digital recording:D.IN-Vflag, When analog recording:”L”
93	DATA	I/O	When recording:Record audio data signal output (Not used this set) When playback:Playback audio data signal input from CXD2535CR (IC200)
94	DIDT	I	16-bit data input terminal for the digital audio in Not used this set (Fixed at “L”)
95	DODT	O	16-bit data output terminal for the digital audio out Not used this set (OPEN)
96	DIRCPB	O	Disc drive,Record or playback mode output of the EFM encoder/decoder Not used this set (OPEN)
97	MIN	I	Defect ON/OFF selection signal input from CXD2535CR (IC200)
98	SPOSL	I	IN/OUT selection input terminal of the pin 87 (“L”:IN,”H”:OUT) (Fixed at”H”)
99	MCK	O	Internal master clock signal output terminal of the RAM controller
100	VSS		Ground terminal

CXD2536R



CS4330E-CSR

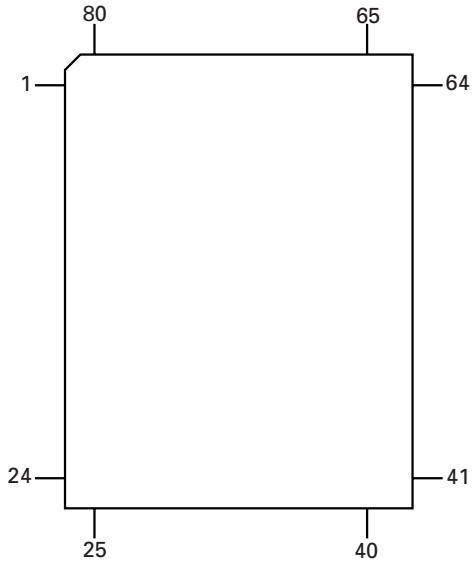


● **Pin Functions(CXP84340-090Q)**

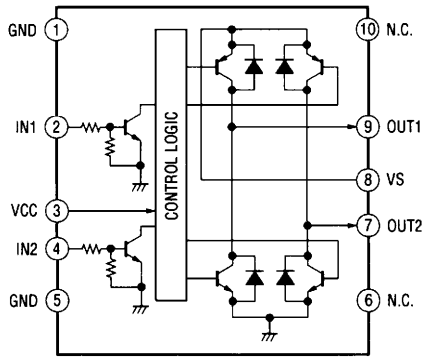
Pin No.	Pin Name	I/O	Function and Operation
1-5	T13-T17	I	Test key (4 × 8 matrix) signal output terminal (Fixed at "L")
6	M1	O	Elevator motor (M904) drive signal output (UP) *1
7	$\overline{M1}$	O	Elevator motor (M904) drive signal output (DOWN) *1
8	M2	O	Loading motor (M903) drive signal output *2
9	$\overline{M2}$	O	Loading motor (M903) drive signal output *2
10	MDMON	O	Power control output (Mechanism deck system) Power ON:"H"
11	$\overline{LES}$	I	Detection signal input from the loading end sensor switch (S902)
12	$\overline{SES}$	I	Detection signal input from the store end sensor switch (S903)
13	$\overline{HOME}$	I	Detection signal input from the home position switch (S901) Home position:"L"
14	DCS1	I	Detection signal input from the disc1 switch (S611) No disc "L"
15	DCS2	I	Detection signal input from the disc2 switch (S612) No disc "L"
16	DCS3	I	Detection signal input from the disc3 switch (S613) No disc "L"
17	DCS4	I	Detection signal input from the disc4 switch (S614) No disc "L"
18	DCS5	I	Detection signal input from the disc5 switch (S615) No disc "L"
19	DCS6	I	Detection signal input from the disc6 switch (S616) No disc "L"
20	CH/$\overline{SINGLE}$	I	Changer/single setting up terminal When used the changer:"H" (Fixed at"H")
21	ILLON	O	Lamp (PL620) drive signal output for illumination When lamp is ON:"H"
22-29	N.C.	O	Not used (OPEN)
30	$\overline{RST}$	I	System reset signal input When reset:"L"
31	EXTAL	I	10MHz system clock signal input
32	XTAL	O	10MHz system clock signal output
33	VSS	-	Ground terminal
34	TX	O	32.768kHz clock signal output for a clock
35	TEX	I	32.768kHz clock signal input for a clock
36	AVSS	-	Ground terminal (Analog system)
37	AVREF	-	Reference voltage (+5V) input for the A/D converter
38	INIT	I	Initial reset signal input (Normally:"H")
39	TEMP	I	Temperature detection signal input
40	EHS	I	Disc hight position detection signal input
41	N.C.	O	Not used (OPEN)
42	EE-CS	O	Chip select signal output for a EEPROM Not used this set (OPEN)
43	EE-CKO	O	Serial clock signal output for a EEPROM Not used this set (OPEN)
44	EE-SIO	I/O	Data signal input/output for a EEPROM Not used this set (OPEN)
45	MD-SO	O	Write data signal output to RF AMP (IC100), CXD2535CR(IC200) and CXD2536CR (IC500)
46	LNKOFF	O	LINK OFF signal output for serial communications Not used this set (OPEN)
47	UNIREQ	O	Request signal output for serial communications Not used this set (OPEN)
48	UNICKI	I	Clock signal (serial communications) input
49	UNISI	I	Data signal (serial communications) input
50	UNISO	O	Data signal (serial communications) output
51	MD-CKO	O	Serial clock signal output to RF AMP (IC100), CXD2535CR (IC200) and CXD2536CR (IC500)
52	MD-SI	I	Read data signal input from CXD2535CR (IC200) and CXD2536CR (IC500)
53	N.C.	O	Not used
54	SENS	I	Internal status (SENS) input from CXD2535CR (IC200) and CXD2536CR (IC500)
55	CC-XINT	I	Interruption status input from CXD2536CR (IC500)
56	LIMIT-SW	I	Detection signal input from the limit switch (S400) When sled limit in:"L"
57	$\overline{DOOR\text{-}SW}$	I	Detection signal input from the door open/close switch (S620) When open:"L"
58	MD-LAT	O	Serial latch signal output to RF AMP (IC100), CXD2535CR (IC200) and CXD2536CR (IC500)
59	$\overline{MD\text{-}RST}$	O	Reset signal output to RF AMP (IC100), CXD2535CR (IC200) and CXD2536CR (IC500) When reset "L"
60	BU-IN	I	Battery detection signal input
61	$\overline{BUS\text{-}ON}$	I	BUS-ON detection signal (serial communications) input BUS ON:"L"
62	SQSY	I	Sub-code Q sync (SCOR) input from CXD2535CR (IC200) "L" every 13.3msec, Almost "H"
63	STR-SW	I	Detection signal input from the STOP switch (S600)
64	FOK	I	Focus OK signal input from CXD2435CR (IC200) "H" is input when the focus is applied
65	MD-ON	O	Power control signal output (Servo system) Power ON : "H"

Pin No.	Pin Name	I/O	Function and Operation
66	EMPH-O	O	Deemphasis control signal output to the D/A converter (IC550) Deemphasis ON "L"
67	A-MUT	O	Audio mute signal output When mute : "H"
68	N.C.	O	Not used (OPEN)
69	CLOCK	O	Clock signal output for test mode indication Not used this set (OPEN)
70	DATA	O	Data signal output for test mode indication Not used this set (OPEN)
71	TM-ON/OFF	I	Test mode set up terminal Normolly : "H" When test mode : "L"
72	VDD		Power supply terminal (+5V)
73	N.C.		Not used (Fixed at "H")
74	TO0	O	Test key (4×8 matrix) signal output terminal (OPEN)
75	TO1	O	Test key (4×8 matrix) signal output terminal (OPEN)
76	TO2	O	Test key (4×8 matrix) signal output terminal (OPEN)
77	TO3	O	Test key (4×8 matrix) signal output terminal (OPEN)
78	TI0	I	Test key (4×8 matrix) signal input terminal (Fixed at "L")
79	TI1	I	Test key (4×8 matrix) signal input terminal (Fixed at "L")
80	TI2	I	Test key (4×8 matrix) signal input terminal (Fixed at "L")

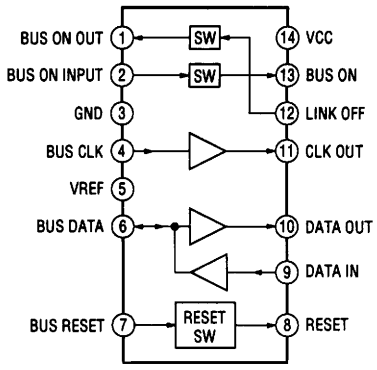
CXP84340-090Q



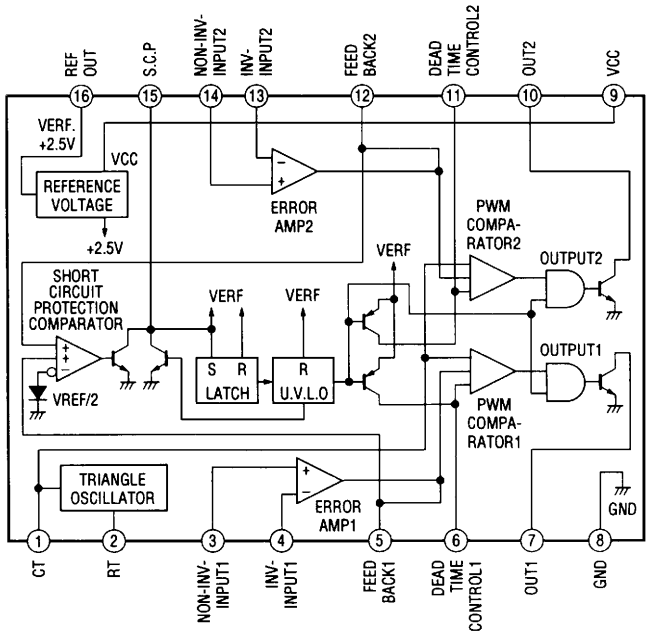
LB1638M



MM1284XFFE



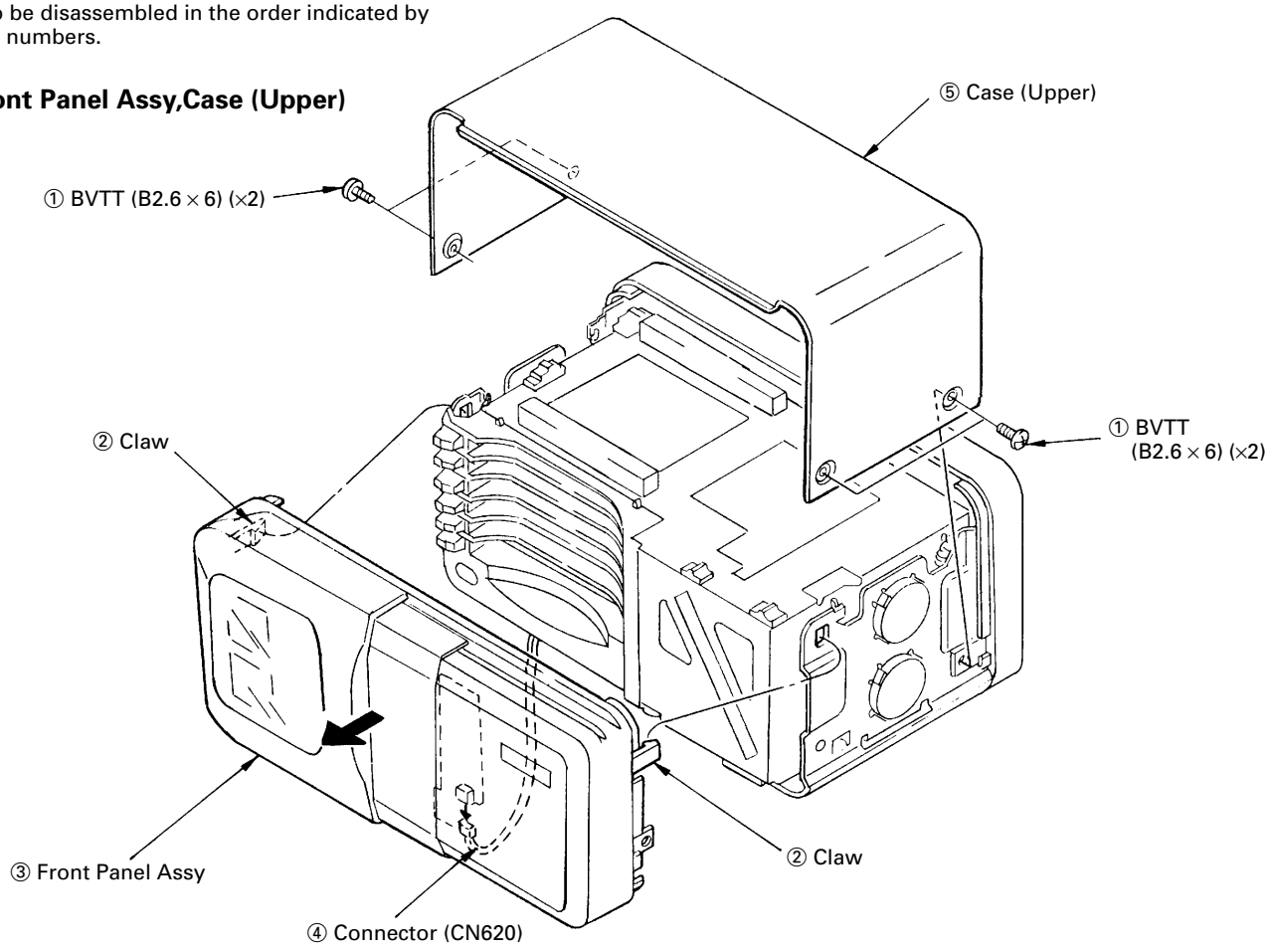
TL1451ACDB-E20



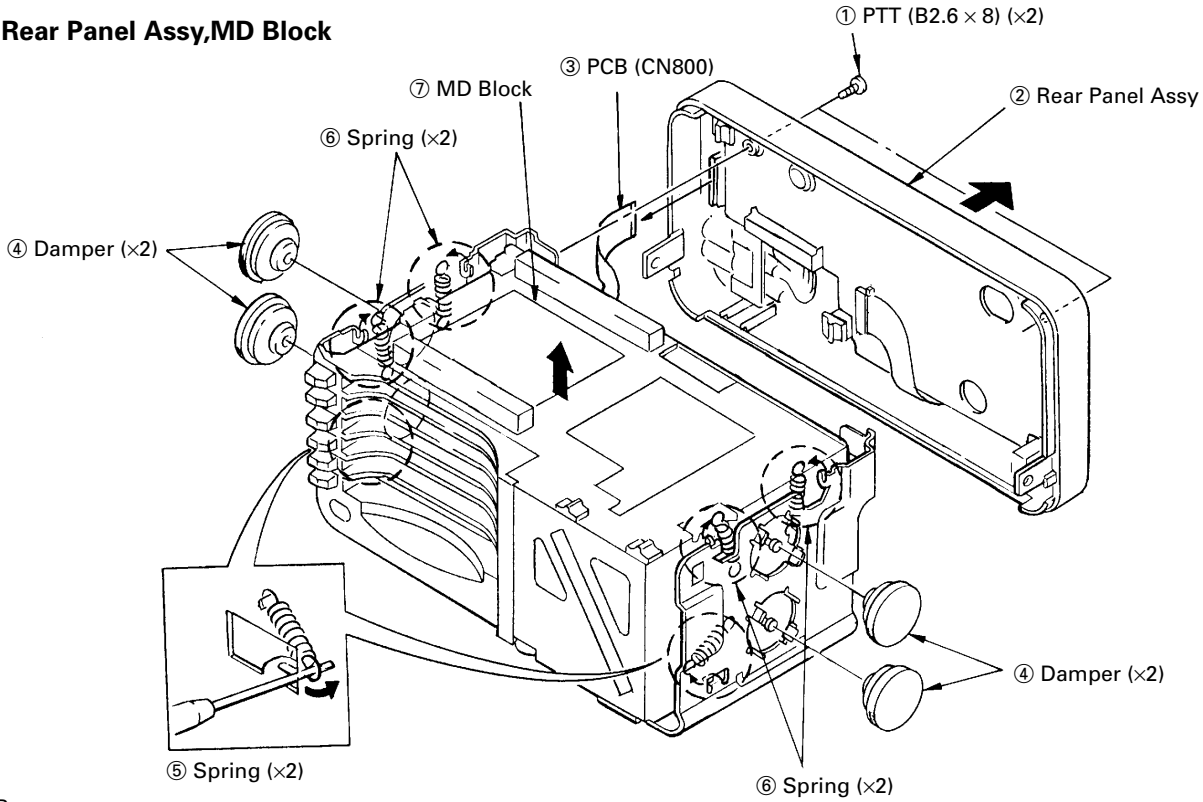
7.2 DISASSEMBLY

• Parts indicated as ① and so on in the illustration are to be disassembled in the order indicated by these numbers.

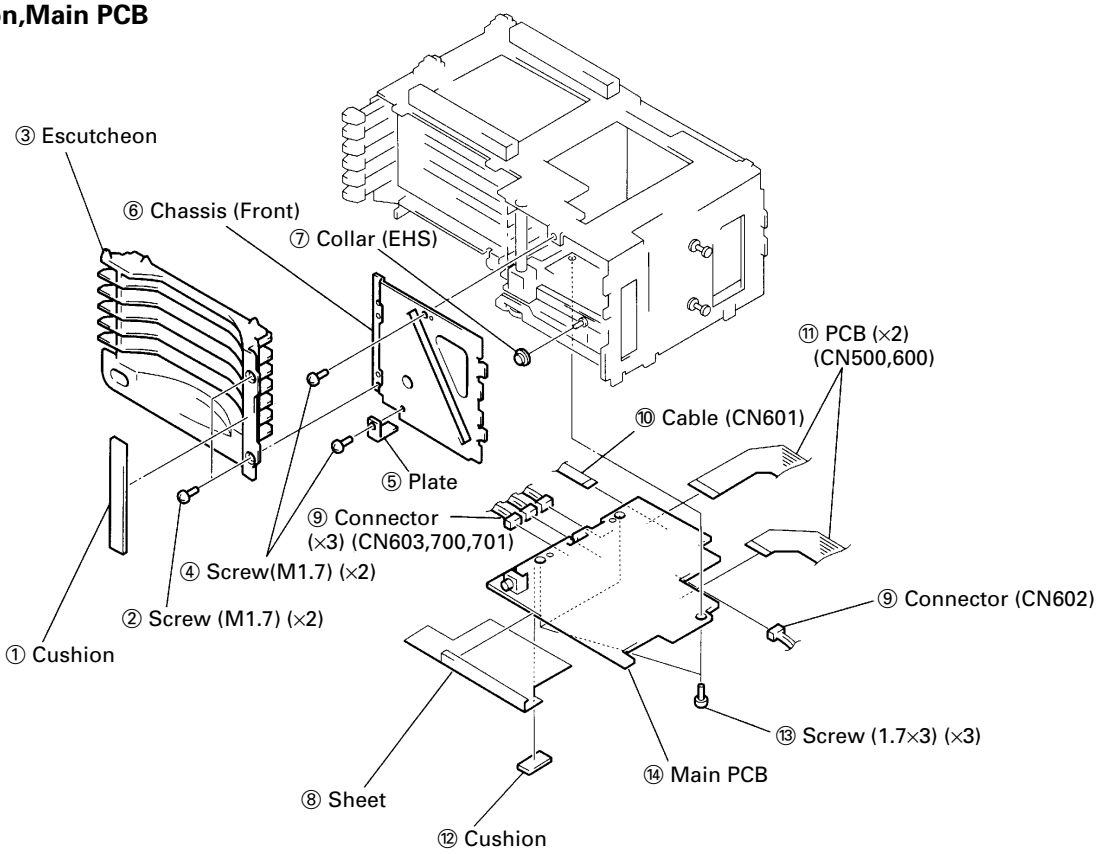
● Front Panel Assy,Case (Upper)



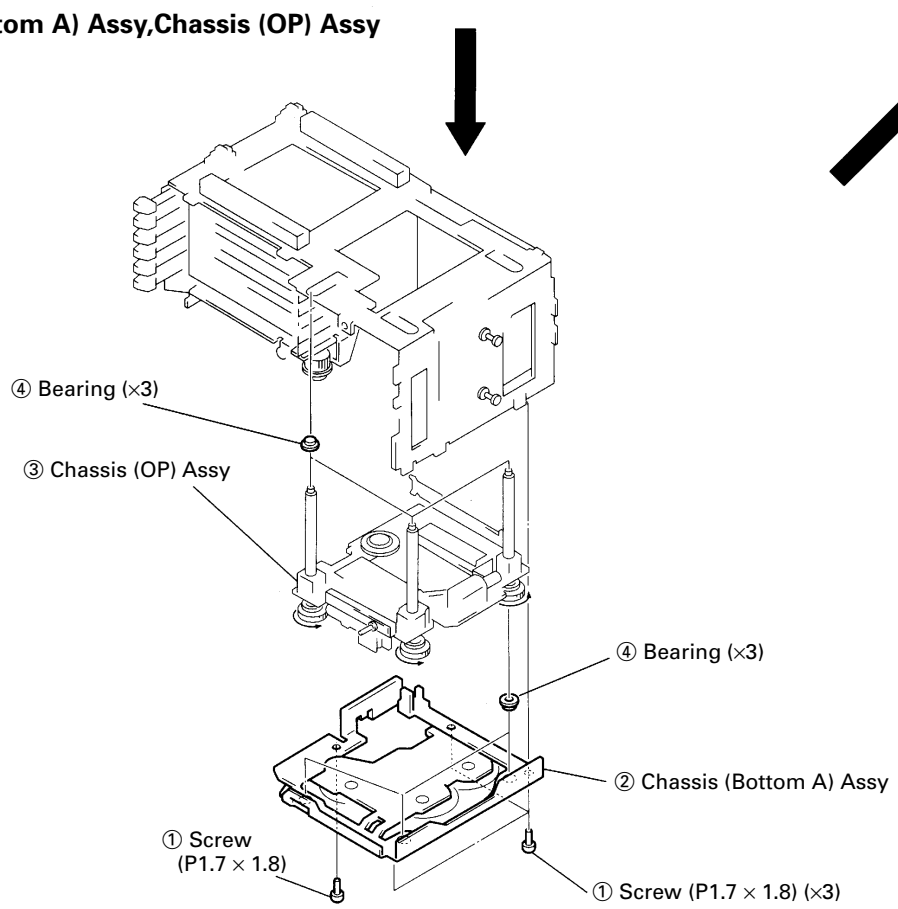
● Rear Panel Assy,MD Block



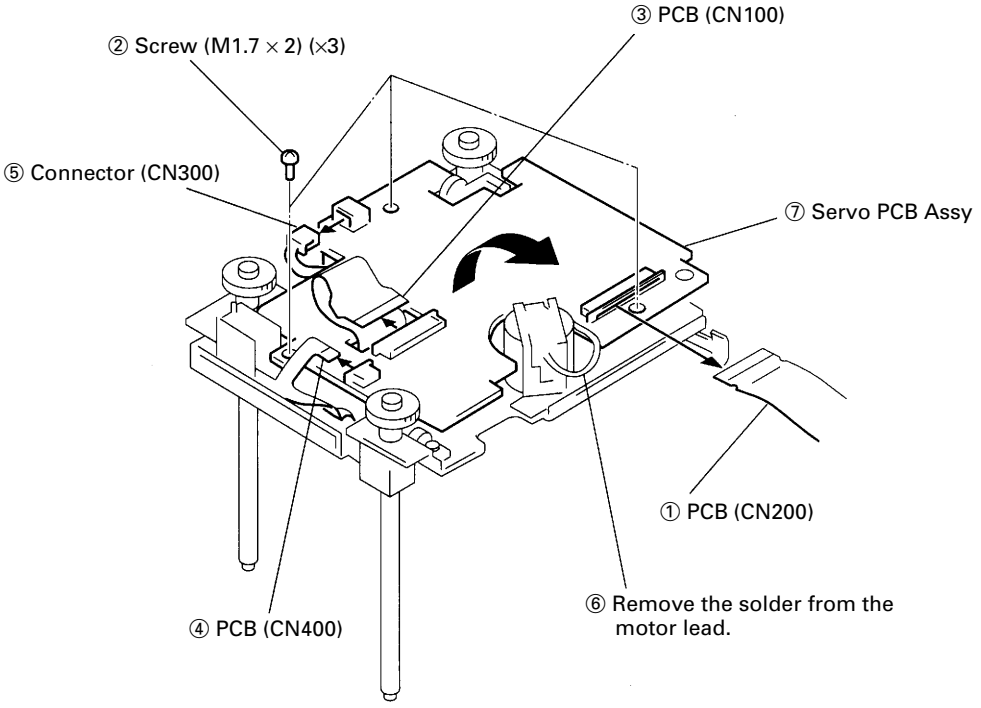
● **Escutcheon,Main PCB**



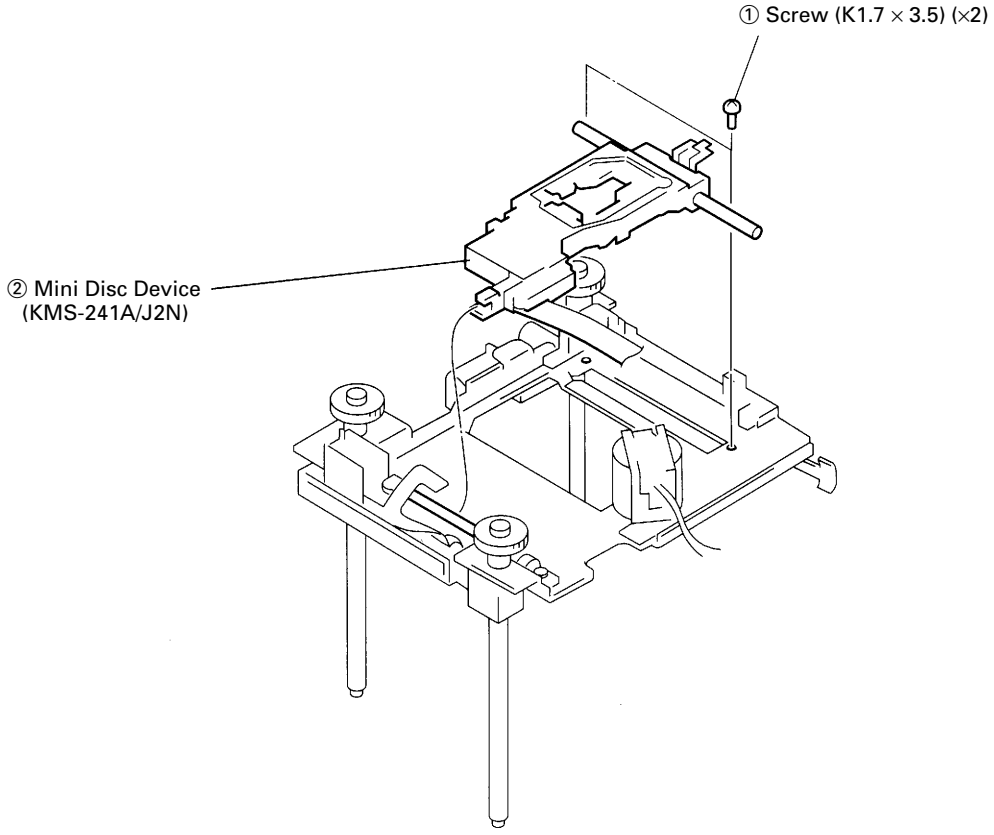
● **Chassis (Bottom A) Assy,Chassis (OP) Assy**



● **Servo PCB**

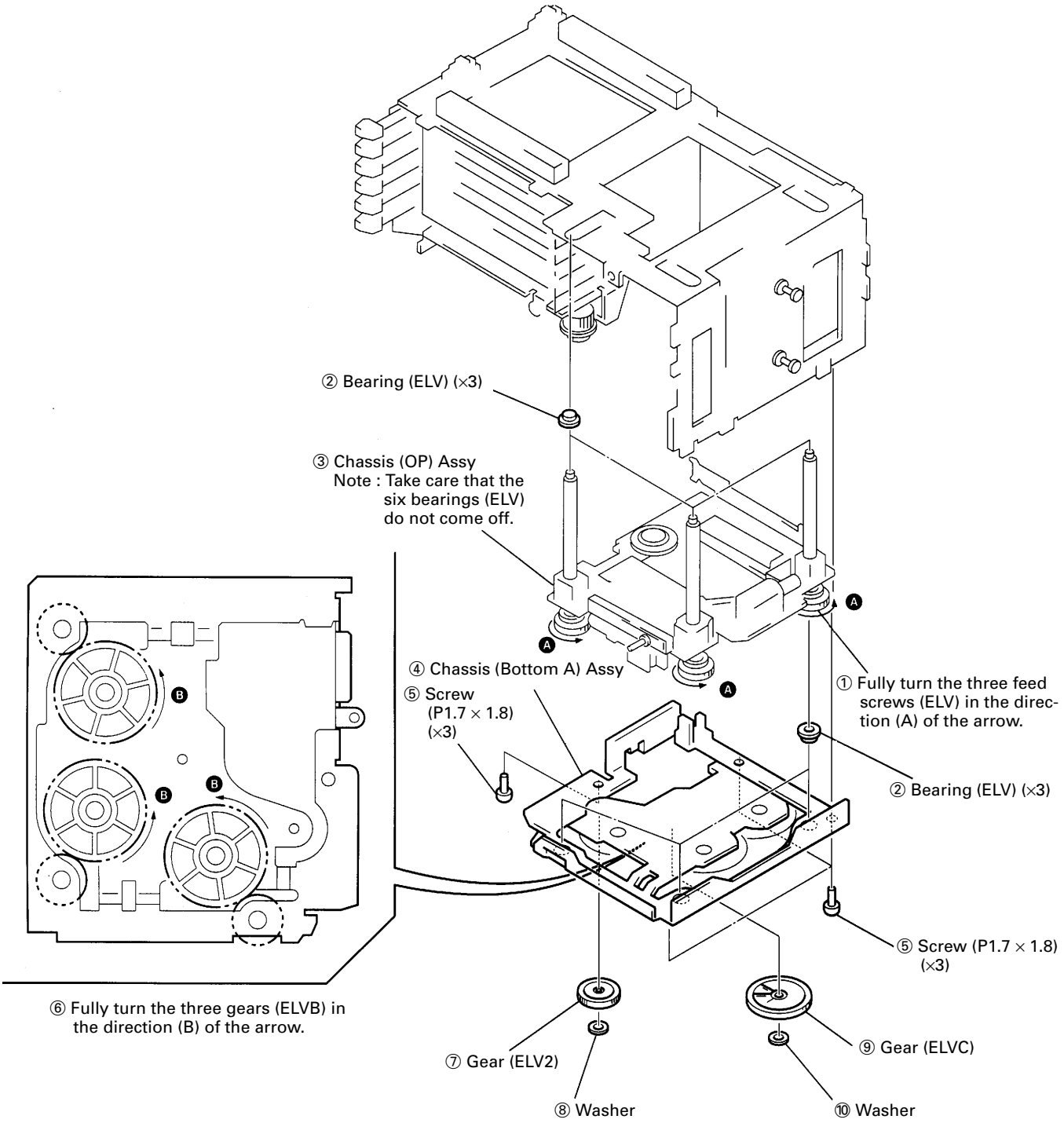


● **Mini Disc Device**

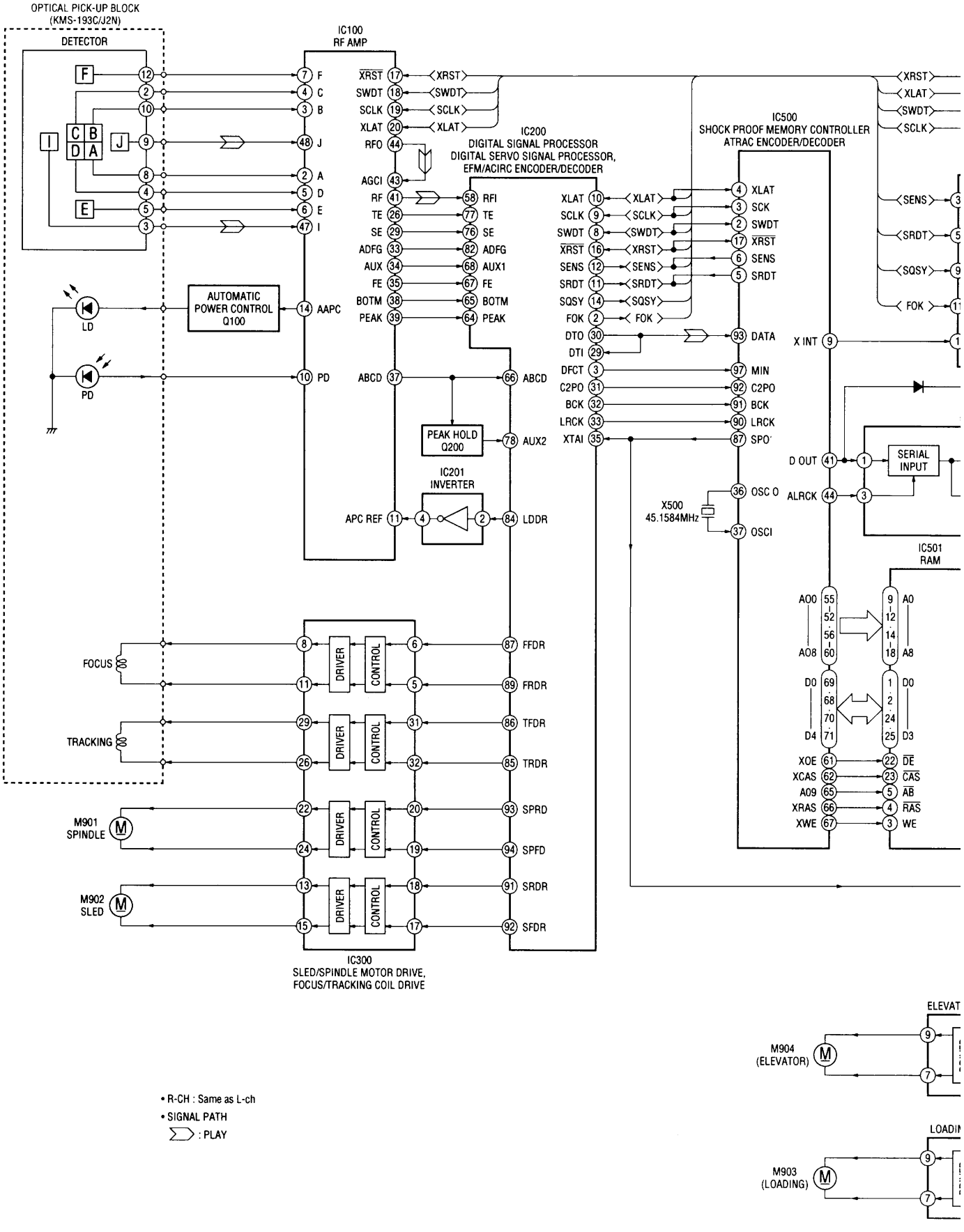


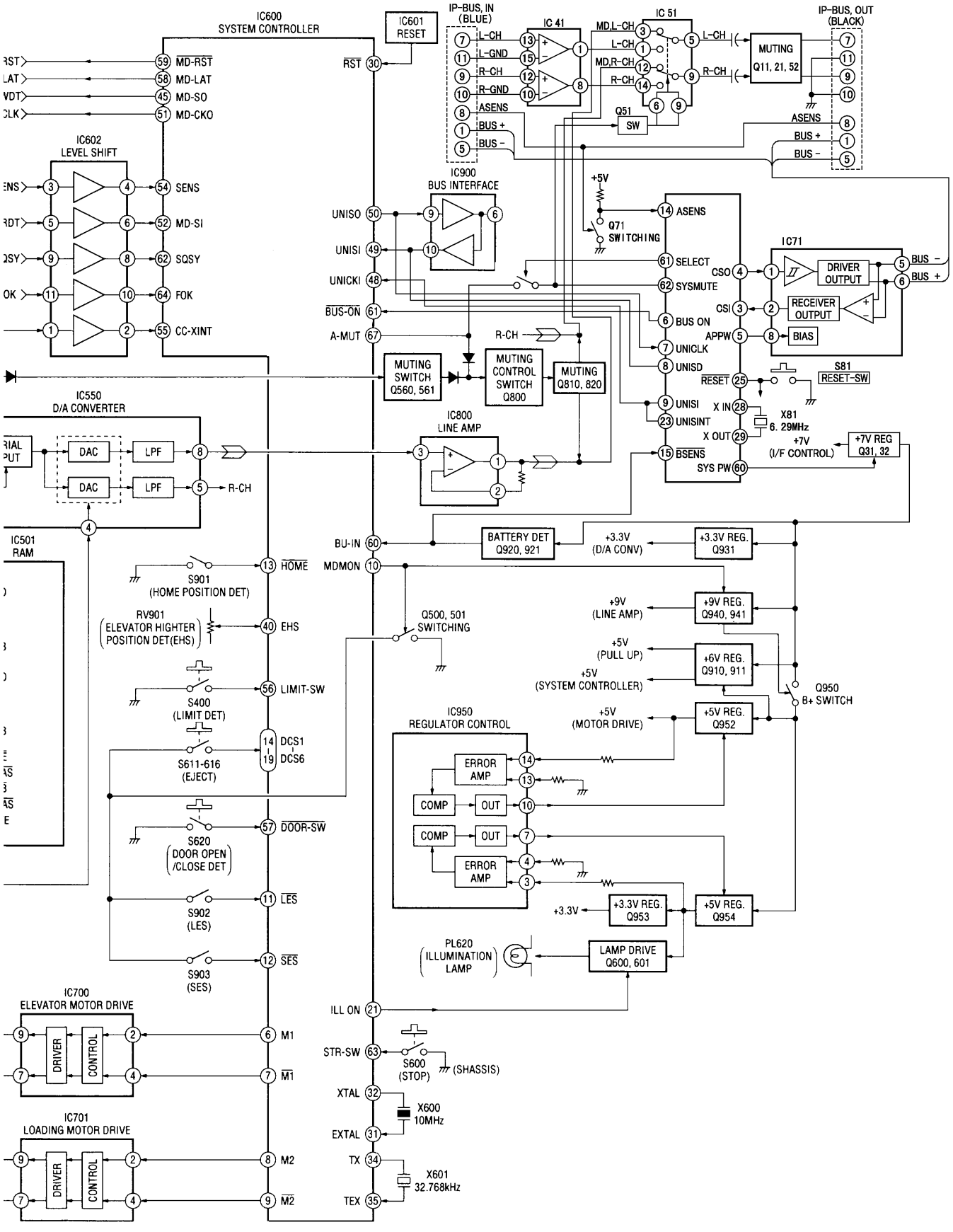
● Precautions on Reassembling the Chassis (OP) Assy

• Parts indicated as ① and so on in the illustration are to be reassembled in the order indicated by these numbers.


② Bearing (ELV) (×3)
③ Chassis (OP) Assy
Note : Take care that the six bearings (ELV) do not come off.
④ Chassis (Bottom A) Assy
⑤ Screw (P1.7 × 1.8) (×3)
① Fully turn the three feed screws (ELV) in the direction (A) of the arrow.
② Bearing (ELV) (×3)
⑤ Screw (P1.7 × 1.8) (×3)
⑥ Fully turn the three gears (ELVB) in the direction (B) of the arrow.
⑦ Gear (ELV2)
⑧ Washer
⑨ Gear (ELVC)
⑩ Washer

7.3 BLOCK DIAGRAM

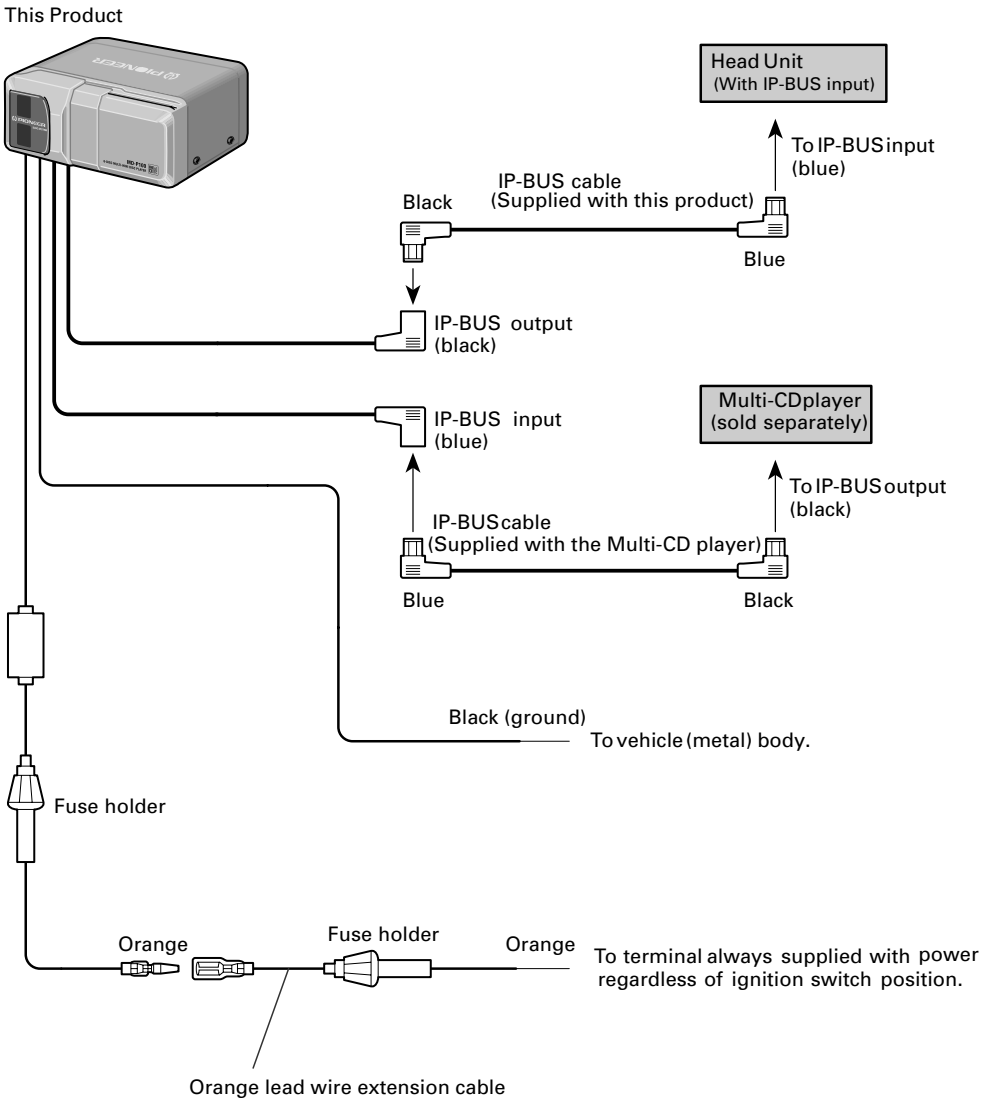



IC600
SYSTEM CONTROLLER
IC601
RESET
IP-BUS, IN
(BLUE)
IC 41
IC 51
IP-BUS, OUT
(BLACK)
MUTING
Q11, 21, 52
Q51
SW
IC602
LEVEL SHIFT
IC900
BUS INTERFACE
Q71
SWITCHING
IC71
DRIVER
OUTPUT
RECEIVER
OUTPUT
BIAS
MUTING
SWITCH
Q560, 561
MUTING
CONTROL
SWITCH
Q800
MUTING
Q810, 820
S81
RESET-SW
IC550
D/A CONVERTER
DAC
LPF
IC800
LINE AMP
X81
6. 29MHz
+7V REG
Q31, 32
+7V
(I/F CONTROL)
IC501
RAM
BATTERY DET
Q920, 921
+3.3V
(D/A CONV)
+3.3V REG.
Q931
S901
(HOME POSITION DET)
RV901
(ELEVATOR HIGHTER
POSITION DET(EHS)
Q500, 501
SWITCHING
+9V
(LINE AMP)
+9V REG.
Q940, 941
+5V
(PULL UP)
+5V
(SYSTEM CONTROLLER)
+6V REG.
Q910, 911
Q950
B+ SWITCH
S400
(LIMIT DET)
IC950
REGULATOR CONTROL
+5V
(MOTOR DRIVE)
+5V REG.
Q952
S611-616
(EJECT)
ERROR
AMP
COMP
OUT
S620
(DOOR OPEN
/CLOSE DET)
+3.3V
+3.3V REG.
Q953
+5V REG.
Q954
S902
(LES)
PL620
(ILLUMINATION
LAMP)
LAMP DRIVE
Q600, 601
S903
(SES)
IC700
ELEVATOR MOTOR DRIVE
DRIVER
CONTROL
S600
(STOP)
(SHASSIS)
X600
10MHz
IC701
LOADING MOTOR DRIVE
X601
32.768kHz

8. OPERATIONS AND SPECIFICATIONS

8.1 OPERATIONS

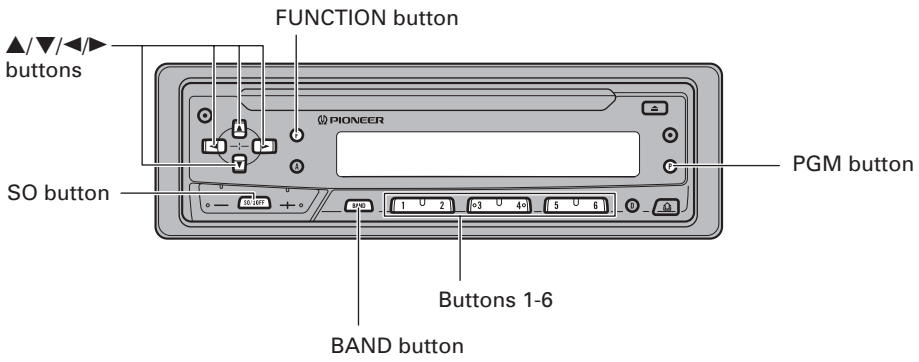
● Connection Diagram



Key Finder

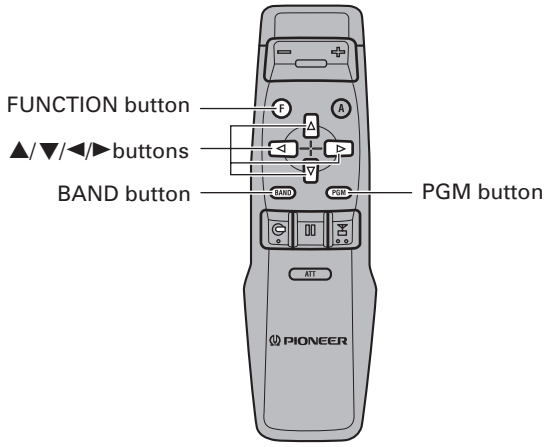
Operate Multi-MD Player functions with the buttons shown below.

Head Unit (e.g. DEH-P645R)



Remote Controller (e.g. DEH-P645R)

Operation is the same as when using buttons on the head unit.



Basic Operation

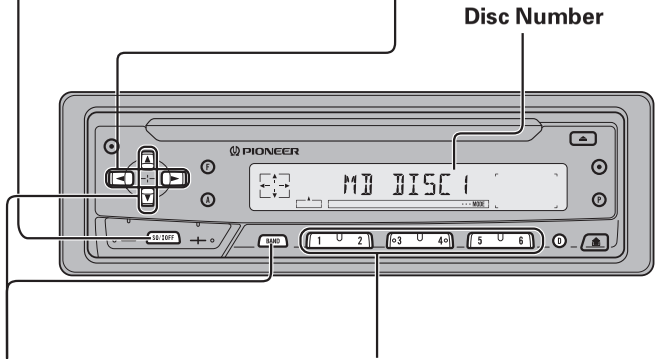
Basic Operation of Multi-MD Player

Selecting the Multi-MD Player Source

- **Press the SO button repeatedly until the Multi-MD Player is selected.**
  The Multi-MD Player starts playing.

Track Search

- **Press the ◄ or ► button to select the desired track.**



Disc Search

- **Press the ▲ or ▼ button to select the desired disc. (Disc Up/Down)**
- **Press the BAND button to select the desired disc. (Disc Up)**

Disc Number Search

- **You can select discs directly with the 1 to 6 buttons. Just press the number corresponding to the disc you want to listen to.**

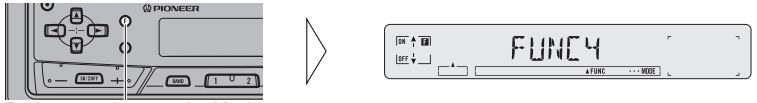
Note:
- If you switch to the Fast Forward/Reverse Mode, the ◄ and ► buttons operate Fast Forward/ Reverse.
- The player reads and memorizes music data recorded on an MD before reproducing it. Because of this, you can enjoy the following features.
  * When the last track on an MD has finished, the player automatically changes to the next MD. Because this change occurs while music data is being played from memory, the interval between the end of the last track on one MD and the start of the first track on the next is shorter.
  * During the time taken to switch between MDs using Disc Search, memorized music data of the previous track is played at reduced volume level.

Entering the Function Menu

The Function Menu lets you operate simple functions for the Multi-MD Player.

Note:
- After entering the Function Menu, if you do not perform an operation within about 30 seconds, the Function Menu is automatically canceled.

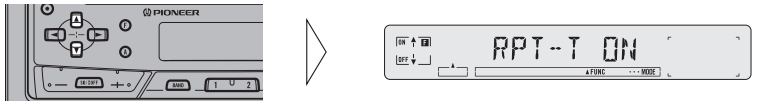
1. Select the desired mode in the Function Menu. (Refer to "Function Menu Functions".)



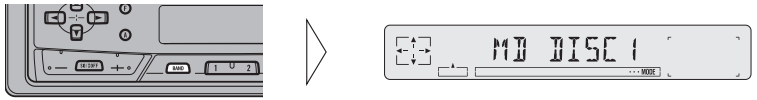
Each press changes the Mode ...

Note:
- When you select the Function Menu, Mode indications (e.g. FUNC4) light for about 2 seconds. After Mode indications have disappeared, the " F " indicator flashes to inform you that you are in the Function Menu.
  If you cancel the Function Menu, the " F " indicator goes out.

2. Operate a mode. (e.g. Repeat Play)



3. Cancel the Function Menu.



Function Menu Functions

The following chart shows functions in the Multi-MD Player Function Menu. This chart shows the function operation and button for each function. For details concerning an operation, refer to the page indicated.

● **Multi-MD Player**

Function name (Display)	Button	:Operation
Display Mode (FUNC1)	▲ or ▼	:Select
Random Play (FUNC2)	▲ or ▼(Hold for 2 seconds)	:Select
Scan Play (FUNC3)	▲ or ▼	:Select
Repeat Play (FUNC4)	▲ or ▼	:Select
Track Selection Mode (AUTO/MANUAL)	◄ or ►	:Select

8.2 SPECIFICATIONS

Power source 14.4 V DC (10.8 – 15.1 V allowable)
Grounding system ..... Negative type
Max. current consumption ..... 0.8 A
Dimensions ..... 176 (W) × 83.5 (H) × 133 (D) mm
Weight ..... 1.2 kg
System ..... Mini disc digital audio system
Usable discs ..... Mini disc
Frequency characteristics .. 20 – 20,000 Hz (±1 dB)
Signal-to-noise ratio 95 dB (1 kHz) (IEC-A network)
Output level ..... 1 V (1 kHz, 0 dB)
Number of channels ..... 2 (stereo)